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AD NUMBER	
AD345229	
CLASSIFICATION CHANGES	
TO:	unclassified
FROM:	confidential
LIMITATION CHANGES	
TO:	Approved for public release, distribution unlimited
FROM:	Controlling Organization. Central Intelligence Agency, Office of Central Reference, 2430 E. Street, NW, Washington, DC 20505.
AUTHORITY	
CIA ltr, 7 Sep 2004; CIA ltr, 7 Sep 2004	

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SCIENTIFIC INFORMATION REPORT  
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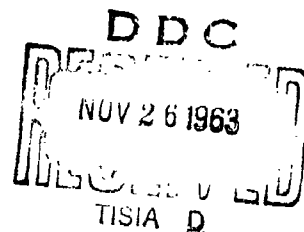
(37)

Summary No. 5182

18 November 1963

Prepared by

Foreign Documents Division  
CENTRAL INTELLIGENCE AGENCY  
2430 E St., NW., Washington 25, D. C.



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C-O-N-F-I-D-E-N-T-I-A-L

SCIENTIFIC INFORMATION REPORT

Chinese Science (37)

This is a serialized report consisting of unevaluated information prepared as abstracts, summaries, and translations from recent publications of the Sino-Soviet Bloc Countries. Individual items are unclassified unless otherwise indicated.

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C-O-N-F-I-D-E-N-T-I-A-L

ABSTRACTS FROM ACTAS SINICA

Biological and Medical Sciences

JUAN Chi-sheng (7086/4949/3932)  
YEN Hsun-ch'u (7051/6676/0443)

"Two New Species in the Group of Orange-Red Verticillate Actinomyces"

Peiping, Wei-sheng-wu Hsueh-pao (Acta Microbiologica Sinica), Vol. 9,  
No. 2, May 63, pp 140-149

Excerpts of Russian Abstract: The authors studied 61 cultures of orange-red verticillate actinomyces which differ in their culture-morphological, physiological, and antibiotic properties and specifications of antagonism. These cultures were related to six species, two of which are new: Culture S 3885 (9 strains) and Culture n-125 (6 strains). The authors list five points in the key to determining species of orange-red verticillate actinomyces.

The author expresses thanks to CH'EN Chia-i (7115/0857/2034), HSING Kuei-hsiang (6717/2710/7449), and CHANG Kuo-wei (1728/0948/0251) for their participation in the work.

(continued)

References: Ten references were used, including 4 Chinese.  
This paper was received for publication on 4 February 1963.

Authors' Affiliation: Both of Institute of Microbiology, Chinese Academy of Sciences, Peiping.

C-O-N-F-I-D-E-N-T-I-A-L

WANG Te-ming (3769/1795/6900)

"Investigation for Controlling Certain Basic Infectious Diseases  
in Fish"

Peiping, Wei-sheng-wu Hsueh-pao (Acta Microbiologica Sinica), Vol  
9, No 2, May 63, pp 150-155

Excerpts of Russian Abstract: This paper is a study on the survival  
history of fresh-water fish in China and methods for controlling  
diseases and their germination. The author cites "four disinfections"  
and "four determinants" and recommends three methods for the com-  
plete control of bacterial disease in these fish.

This paper was received for publication on 23 October 1962.

Authors Affiliation: Institute of Marine Biology, Chinese Academy  
of Sciences, Wu-ch'ang.



C-O-N-F-I-D-E-N-T-I-A-L

TAN Wei-ts'eng (0830/1983/2582)  
CH'AI Ming (2693/2494)  
TAI Hsiang-p'eng (2071/4382/7720)  
CHANG Hsien-wu (1728/2009/2976)

"Study on Gibberellins: 3. Artificial Change and Hardening of  
Fusarium sp."

Peiping, Wei-sheng-wu Hsueh-pao (Acta Microbiologica Sinica), Vol  
9, No 2, May 63, pp 168-172

Translation of Russian Abstract: (1) Spores of Fusarium sp. No  
22-A were developed in the Rawling-Thoma culture medium in doses  
of 0.1, 0.2, 0.5, and 1.0 /ml of  $\text{Na}_2\text{HPO}_4$ . In concentrations  
of 0.1-0.2 /ml there appear colonies whose productivity increases  
30-50 percent in comparison with the control group. (2) Continuous  
hardening of Fusarium sp. No 22-B in test cultures with concentrations  
of 20, 40, 60, 80, and 11 /ml of unpurified gibberellin crystals  
does not increase their productivity. Productivity increased con-  
siderably during hardening of Fusarium sp.

(continued)

No 22-B with a filtrate of gibberellin fermentation in concentrations  
of 120 /ml. The potency of Fusarium sp obtained by the slide method  
amounts to 375 /ml and increases 2-3 times as compared with the con-  
trol group. However, their potency proved unstable when transplanted  
in a dense medium without a fermented gibberellin filtrate. (3) The  
combination of the two methods -- ultraviolet irradiation and hardening  
by gibberellins -- affords a sharp increase in the potency of Fusarium  
sp No 22-B. The potency of the variant obtained after ultraviolet  
irradiation for 4 minutes and hardening of the culture medium with  
a 50 /ml gibberellin concentrate doubles that of the variant obtained  
solely through ultraviolet ray treatment.

The authors express thanks to LU Pen-hsuan (4151/2609/8830), LI  
Yang-fu (2621/7402/4395), T'ANG Yu-li (0781/3768/7787), HAN Wen-ko  
(7281/2429/7040) for participation in the work.

Work on this paper was done in 1959-1960; paper was received for  
publication on 29 May 1960.

Authors' Affiliation: All of Institute of Forestry and Pedology,  
Chinese Academy of Sciences, Shenyang.

TING Chien (0002/7002)  
WANG I-fu (3769/5030/3940)  
WANG Chi-hsuan (3769/1015/6693)

"Study of Thermophilic Anaerobic Cellulose-Decomposing Bacteria"

Peiping, Wei-sheng-wu Hsueh-pao (Acta Microbiologica Sinica), Vol 9,  
No 2, May 63, pp 173-177

Excerpts of Russian Abstract: A number of cultures of bacteria which ferment in cellulose at high temperatures under anaerobic conditions were obtained from compost, manure, and silt. Enriched cultures of thermophilic cellulose bacteria contain various aerobic and anaerobic associated species which do not decompose cellulose. The authors developed a method of isolating pure cellulose bacteria, based on the sequential elimination of aerobic and anaerobic associated-bacteria from the culture on the principle of their physiological differences.

The authors express thanks to CHANG Hsien-wu (1728/2009/2976) under whose guidance this paper was done.

This paper was received for publication on 4 February 1963.

(continued )

Authors' Affiliation: All of Institute of Forestry and Pedology,  
Chinese Academy of Sciences, Shenyang.

CH'EN Tzu-ying (7115/1311/5391)

"Basic Characterization of Root Microflora in Rice"

Peiping, Wei-sheng-wu Hsueh-pao (Acta Microbiologica Sinica), Vol 2, No 2, May 63, pp 186-192

Translation of Russian Abstract: The number of root microflora in rice is considerably less than in soil plants. It varies according to the phases of plant development, agrotechnical background, and soil conditions. Root microflora in rice produces sporogenous bacteria, most of which are observed during the period of the nutritive phase to the maturing phase. Nonsporogenous bacteria related to *Pseudomonas* exist in considerable number in the transplanting stage. The source of root microflora in rice is soil microflora, not the epiphytic microflora of the seeds.

Root microflora of rice has a high ammonia-fixing capability. It cannot restore the nitrate and use cellulose. It inhibits the development of *Ax. chroococcum* and possibly supplants the latter in the composition of the root microflora of rice.

(continued)

The author expresses thanks to the members of Microbiology Section, Nanking Institute of Soils, Chinese Academy of Sciences, and the Soil Chemistry Section of the former East China Institute of Agricultural Sciences for their help.

This paper was received for publication on 3 December 1962.

Author's Affiliation: Institute of Soils and Fertilizer, Chinese Academy of Agricultural Sciences, Peiping.

C-O-N-F-I-D-E-N-T-I-A-L

LO Ming-tien (5012/2494/0368)

"Study on the Formation of Tubers and Their Effectiveness on Beans (*Phaseolus Aureus*) Infected by Root Nodule Bacteria From Various Cross-Inoculated Groups"

Peiping, Wei-sheng-wu Hsueh-pao (Acta Microbiologica Sinica), Vol 9, No 2, May 63, pp 193-196

Excerpts of Russian Abstract: This paper traces the formation of tubers in beans infected by root nodule bacteria in "mash" beans, "adzuki" beans, peanuts, soy, black-eyed peas, ordinary beans, and lupines. Root nodule bacteria of peas do not induce this formation in "mash" beans. The abstract lists the greatest and the least effective strains of the aforementioned bacteria.

Parts of this paper were done under the guidance of Prof Z. G. Razumovskaya, a Doctor of Biology at the Microbiology Teaching and Research Section, Leningrad University, USSR.

This paper was received for publication on 3 June 1962.

Author's Affiliation: Current mailing address is Shantung University, Tsinan.

CHENG Yu-hsia (6774/1635/7209)

"The Effect of Vitamin B<sub>12</sub> on Synthesis of B-Galactosidase by *Escherichia Coli*"

Peiping, Wei-sheng-wu Hsueh-pao (Acta Microbiologica Sinica), Vol 9, No 2, May 63, pp 111-117

Abstract: English abstract accompanies this article.

The author expresses thanks to Prof CH'EN Shan-chiung (3088/0810/8741) for his guidance and CHU Chia-feng (2612/1367/6265) and WANG Chia-hsun (3769/1367/7460) for their participation in part of the work.

This paper was received for publication on 4 February 1963.

Author's Affiliation: Microbiology Laboratory, Institute of Plant Physiology, Chinese Academy of Sciences, Shanghai.

YANG Ch'ang-jen (2799/1603/0088)  
CH'EN Ts'un-jou (6929/1317/2677)  
CHOU Kuang-yu (0712/0342/1342)

"A New Species of Brevibacterium Capable of Producing a-Ketoglutaric Acid and Glutamic Acid"

Peiping, Wei-sheng-wu Hsueh-pao (Acta Microbiologica Sinica), Vol 9, No 2, May 63, pp 118-122

Abstract: English abstract accompanies this article.

The authors express thanks to CH'ENG T'ung-ts'un (2110/4547/2625) and CH'EN Chu-sheng (7115/7467/5116) for valuable opinions.

References: A total of 20 references were used including 16 Chinese dated 1955 to 1962, 5 English, and 5 Japanese.

This paper was received for publication on 8 November 1962.

Authors' Affiliations: YANG and CHOU of Institute of Biochemistry, Chinese Academy of Sciences, Shanghai, and CH'EN of Department of Biology, Peiping University.

LU Shih-i (7120/1597/5030)  
K'UNG Hsien-liang (1313/7359/5328)  
YUEH Te-ch'ao (1471/1795/5389)  
YANG Yun-p'eng (2799/0061/7720)

"An Investigation of the Production of Ergot Alkaloid by Fermentation"

Peiping, Wei-sheng-wu Hsueh-pao (Acta Microbiologica Sinica), Vol 9, No 2, May 63, pp 123-132

Abstract: English abstract accompanies this article.

The authors express thanks to Ts'AI Miao-ying (5591/1181/5391) and CH'EN Ch'ao-ying (7115/6389/5391) for participation in part of the work.

This paper was received for publication on 7 March 1963.

Authors' Affiliations: LU and K'UNG, Institute of Microbiology, Chinese Academy of Sciences, Peiping, YUEH and YANG, Institute of Materia Medica, Chinese Academy of Medical Science, Peiping.

CHANG Shu-ch'eng (1728/2885/2398)  
YANG Lien-wan (2799/1670/1238)  
WANG Hui-lien (3769/1920/5571)

"Studies on the Production of Glycerol and Arabitol by Osmophilic Yeasts II. Arabitol Production by *Hansenula Arabitogenes* Fang"

Peiping, Wei-sheng-wu Hsueh-pao (Acta Microbiologica Sinica), Vol 9, No 2, May 63, pp 134-139

Abstract: English abstract accompanies this article.

This paper, was read at the January 1960 nationwide Microbiology Scientific Conference, was received for publication on 7 September 1962.

Authors' Affiliation: All of Institute of Microbiology, Chinese Academy of Sciences, Peiping.

HSU Ju-ch'ien (6079/1172/3819)  
CHOU Hung-pin (0719/7703/1755)  
YU Wen-huan (6735/2429/3562)

"Preliminary Studies of the Species of the Bacteria of Carp and Croak Fish"

Peiping, Wei-sheng-wu Hsueh-pao (Acta Microbiologica Sinica) Vol 9, No 2, May 63, pp 157-163

Abstract: English abstract accompanies this article.

The authors express thanks to Prof CH'ENG Cheng-chi (2110/6774/7162) and Prof YU Ta-fu (0205/1129/4811) for their guidance; to many classmates at Shanghai Fisheries College; to YANG Fang-chung (2799/2455/0022), CH'EN Ling (7115/3781), CHIN Li-hua (6855/7787/5478), TU Shenglung (2629/5110/7127), and LIN Hsiao-jen (2651/2556/0088) of Nanking University; and to members of Institute of Microbiology, Chinese Academy of Sciences, for help in the work.

This paper was received for publication on 20 September 1962.

Authors' Affiliation: All of Department of Biology, Nanking University.

TS'AI I-ch'uan (5591/1355/2938)  
KAO Shang-yin (7559/1424/5593)

"Studies on Actinophage I. Isolation of a Pure Strain of Actinophage"

Peiping, Wei-sheng-wu Hsueh-pao (Acta Microbiologica Sinica), Vol 9,  
No 2, May 63, pp 164-167

Abstract: English abstract accompanies this article.

The authors thank K'AO Li-hua (2688/7787/2938) for his participation  
in the work.

This paper was received for publication on 28 February 1963.

Authors' Affiliation: South Central Institute of Microbiology,  
Chinese Academy of Sciences, Wu-chang.

CHANG Yuan-lung (1728/0337/7893)  
WAN Chin-ching (5502/6855/4737)

"A Study of the Microorganisms in the Rhizosphere of Wheat I. The  
Variation in Number and Composition of the Rhizosphere Bacteria  
in the Principia Developmental Stages of Wheat"

Peiping, Wei-sheng-wu Hsueh-pao (Acta Microbiologica Sinica), Vol  
9, No 2, May 63, pp 178-184

Abstract: English abstract accompanies this article.

References: A total of 15 references were used, including 3 Chinese  
and 8 Russian.

This paper was received for publication on 25 January 1963.

Authors' Affiliation: Honan Agricultural College, Chengchow.

C-O-N-F-I-D-E-N-T-I-A-L

YAO Jui-lin (1202/3843/7792)  
KUO Chun-chun (6753/0689/5483)  
YANG Lien-wan (2799/1670/1238)  
WANG Hui-lien (3769/1920/5571)  
LI Shu-fang (7812/3219/5364)  
CHANG Shu-cheng (1726/2885/2398)

"Vitamin Contents in Geotrichum candidum and Neurospora intermedia"

Peiping, Wei-sheng-wu Hsueh-pao (Acta Microbiologica Sinica), Vol 9, No 2, May 63, p 197-198

Abstract: Not given

The authors express thanks to HSIEH Wu-chen (6200/5294/3791), NA Shu-min (6719/3219/2404), JEN Yung-o (0117/3057/1230), and HU Chih-hsiang (2083/5347/7449) and trainees LIU Ti-liang (0491/2769/5328), CHIANG Jih-jen (3068/2480/0088), and TI Hung (3695/1347) for their participation in the work and to Nutrition Section, Institute of Labor Hygiene, Chinese Academy of Medical Sciences, for giving the bacillus.

This paper was received for publication on 4 March 1963.

Authors' Affiliation: All of Institute of Microbiology, Chinese Academy of Sciences, Peiping.

WU Yen-yung (0702/5838/1661)  
LIU Ta-chiang (0491/1129/3068)  
KUO Shih-tse (6753/0013/0463)  
HSU Ch'eng-chi (1776/2052/1015)

"The Effect of Aeration on Artrospore Disarticulation of Geotrichum candidum in Submerged Culture"

Peiping, Wei-sheng-wu Hsueh-pao (Acta Microbiologica Vol 9, No 2, May 63, pp 198-199)

Abstract: Not given.

The authors express thanks to HUANG Yung-hsiu (7806/3057/4423), CHANG Fa-ch'iang (1728/4099/8825), WANG Hsi-p'in (3769/6007/5111), and HUANG Ch'iu-ch'un (7806/4428/4783) for their participation in the work.

This paper was received for publication on 1 June 1962.

Authors' Affiliation: All of Southwest Institute of Microbiology, Chinese Academy of Sciences, Chengtu.



C-O-N-F-I-D-E-N-T-I-A-L

WANG Hui-lien (3769/1920/5571)  
YANG Lien-wan (2799/1670/1238)  
NA Shu-min (6719/3219/2404)  
KUO Chun-chun (6753/0689/5483)  
CHANG Shu-cheng (1728/2885/2398)  
HSU Hsiang-ying (1776/4302/6601)

"Glycerol Production by *Zygosaccharomyces chevalieri* Guill 2.309"

Peiping, Wei-sheng-wu Hsueh-pao (*Acta Microbiologica Sinica*), Vol 9,  
No 2, May 63, pp 200-201

Abstract: Not given

References: Two Chinese references, dated 1962 and 1963, and one  
English, dated 1949, were used.

This paper was received for publication on 4 March 1963.

Authors' Affiliations: WANG, YANG, NA, KUO, and CHANG and of the  
Institute of Microbiology, Chinese Academy of Sciences, Peiping,  
and HSU of Institute of Chemical Industry, Kiangsu Provincial  
Department of Heavy Industry, Nanking.

WANG Pao-han (3769/1405/5060)

"A Pure Death Process of Ionizing Radiation"

Peiping, Wei-sheng-wu Hsueh-pao (*Acta Microbiologica Sinica*), Vol 9,  
No 2, May 63, pp 201-202

Abstract: Not given

This paper was received for publication on 7 March 1963.

Author's Affiliation: Institute of Microbiology, Chinese Academy  
of Sciences, Peiping.

LI Chih-cheng (2621/2972/2973)  
CHIN Ch'eng-chung (6855/2052/1813)

"Effect of the Root System on the Vital Activity of Wheat Leaves in the Final Period of Development"

Peiping, Shih-yen Sheng-wu Hsueh-pao (Acta Biologiae Experimentalis Sinica), Vol 8, No 2, May 63, pp 252-257

Excerpts of Russian Abstract: This paper is a study of the effect of the wheat root system on the growth of leaves in both the presence and absence of nutritive elements when a certain amount of the roots has been removed and the remainder grown in a water culture. The growth of leaves in the final period of development depends mainly on other values of the root system. The root system is important in determining the protein content in the leaves, and the strength of the root system affects the maturation rate in the wheat plant.

This paper was received for publication on 3 December 1962.

Authors' Affiliation: Both of Institute of Plant Physiology, Chinese Academy of Sciences, Shanghai.

WANG An-ch'i (3076/1344/3023)  
WANG Ch'un-yuan (3769/2504/0337)

"Genetic Effects on Goldfish, *Carassius Auratus*, Induced by Ultrasonic Wave"

Peiping, Shih-yen Sheng-wu Hsueh-pao (Acta Biologiae Experimentalis Sinica), Vol 8, No 2, May 63, pp 131-136

Abstract: English abstract accompanies this article.

The authors express thanks to T'AN Chia-chen (6151/1367/2823) for his opinions; to CH'EN Hsiu-lan (7115/4423/5695), CHANG Jui-ch'ing (1728/3843/3237), CH'ENG Kuang-ch'ao (4453/0342/3390), and CHU I-hua (1337/4135/5478) for participating in the work; and to CHIN Yen-fa (6855/1693/4099) for raising the goldfish.

This paper was received for publication on 20 June 1962.

Authors' Affiliation: Both of Institute of Genetics, Chinese Academy of Sciences.

C-O-N-F-I-D-E-N-T-I-A-L

CHIAO Jui-shen (3542/3843/6509)  
SHEN Yung-sh'iang (3476/3057/1730)  
LOU Ch'un-chu (2869/4783/5468)  
CHANG Hsueh-ts'ung (1728/7185/5115)  
WANG Hao (3769/3185)

"Studies on the Biosynthesis of Riboflavin by *Ashbya Gossypii* III.  
A Comparison on the Utilization of Glucose and Maltose by *Ashbya Gossypii*"

Peiping, Shih-yen Sheng-wu Hsueh-pao (*Acta Biologiae Experimentalis Sinica*), Vol 8, No 2, May 63, pp 139-146

Abstract: English abstract accompanies this article.

The authors express thanks to LIN Shui-chung (2651/3055/1813), CHIN Chih-k'un (6855/1807/0981), CHANG I-fen (1728/4135/2780), LIN Yu-ying (2651/3768/5391), and HO Mei-chen (0149/5019/7201) for participating in the technical work.

This paper was received for publication on 5 July 1962.

Authors' Affiliations: All of Laboratory of Microbiological Physiology, Institute of Plant Physiology, Chinese Academy of Sciences, Shanghai.

LO Shih-wei (5012/1102/7279)  
HUANG Wen-hui (7806/2429/1798)  
T'AN Hui-fen (6223/1920/5358)

"Further Studies on the Effect of Gibberellin on Cold Resistance of Vegetables"

Peiping, Shih-yen Sheng-wu Hsueh-pao (*Acta Biologiae Experimentalis Sinica*), Vol 8, No 2, May 63, pp 150-154

Abstract: English abstract accompanies this article.

The authors express thanks to YU Jui-ch'eng (0205/3843/2052) for participating in the work.

References: Of the 6 references used, 4 were in Chinese, one in English, and one in Russian, dated 1958-1961.

This paper was received for publication on 29 August 1962.

Authors' Affiliation: All of laboratory of Phytohormones, Institute of Plant Physiology, Chinese Academy of Sciences, Shanghai.

CHIN Ch'eng-chung (6855/2052/1813)  
HSU Chu-yun (1776/4554/4596)

"Effects of Benzimidazole and Kinetin on Leaves"

Peiping, Shih-yen Sheng-wu Hsueh-pao (Acta Biologiae Experimentalis Sinica), Vol 8, No 2, May 63, pp 155-162

Abstract: English abstract accompanies this article.

The authors express thanks to SHING Kuo-an (2529/0948/1344) for participating in the work.

This paper was received for publication on 31 October 1962.

Authors' Affiliation: Both of Institute of Plant Physiology, Chinese Academy of Sciences, Shanghai.

CHIN Ch'eng-chung (6855/2052/1813)  
HSU Chu-yun (1776/4554/4596)  
SHING Kuo-an (2529/0948/1344)

"Action of Benzimidazole on Protein Synthesis in Detached Leaves"

Peiping, Shih-yen Sheng-wu Hsueh-pao (Acta Biologiae Experimentalis Sinica), Vol 8, No 2, May 63, pp 163-169

Abstract: English abstract accompanies this article.

This paper was received for publication on 31 October 1962.

Authors' Affiliation: All of Institute of Plant Physiology, Chinese Academy of Sciences, Shanghai.

CH'EN Han-yuan (7115/3352/3293)

"Studies on Experimental Rat Thyroid Tumor III. The Measurement of the Activity of Thyrotropic Hormone in Pituitary and in Serum of Rat During Tumorigenesis"

Peiping, Shih-yen Sheng-wu Hsueh-pao (Acta Biologiae Experimentalis Sinica), Vol 8, No 2, May 63, pp 170-181

Abstract: English abstract accompanies this article.

The author expresses thanks to Prof YAO Hsin (1202/9515) for reviewing the work and to WANG Chueh (3769/3778) and TS'AI Kuan-ken (5591/7070/2704) for participating in the technical work.

This paper was received for publication on 13 July 1962.

Author's Affiliation: Institute of Experimental Biology, Chinese Academy of Sciences, Shanghai.

CHANG Chung-shu (1728/1813/1859)

CHAO Shou-yuan (6392/1108/0337)

T'AN Chia-chen (6151/1367/2823)

LIU Tsu-tung (0491/4371/3159)

"The Cytological Effects of X-irradiation on the Testes of the Monkey, Macaca Mulatta, With Special Reference to the Comparison of Cytological and Histological Observations"

Peiping, Shih-yen Sheng-wu Hsueh-pao (Acta Biologiae Experimentalis Sinica), Vol 8, No 2, May 63, pp 185-190

Abstract: English abstract accompanies this article.

This paper was received for publication on 3 October 1962.

Authors' Affiliation: All of Institute of Genetics, Fudan University, Shanghai.

LI Wen-yu (2621/2429/5940)  
CH' IEN Jo-lan (6929/5387/5695)  
HU Chao-ch'ing (5170/0340/1987)

"The Inhibitory Effect of Ascites Tumor Mitochondria on Aerobic Glycolysis"

Peiping, Shih-yen Sheng-wu Hsueh-pao (Acta Biologiae Experimentalis Sinica), Vol 8, No 2, May 63, pp 192-202

Abstract: English abstract accompanies this article.

The authors express thanks to LU Chia-hung (0712/1367/7703) for his guidance and to WANG En-pi (3076/1869/3880) for his help in the technical work.

This paper was received for publication on 30 October 1962.

Authors' Affiliation: All of the Oncology Laboratory, Institute of Experimental Biology, Chinese Academy of Sciences.

CHU Jun (2612/3387)  
LU Shu-hsia (0712/3219/7209)

"Effects of X-rays on the Growth, Maturation, and Fertility in Rats Irradiated at Seventh Day After Birth IV. Development of the Ovary"

Peiping, Shih-yen Sheng-wu Hsueh-pao (Acta Biologiae Experimentalis Sinica), Vol 8, No 2, May 63, pp 205-216

Abstract: English abstract accompanies this article.

The authors express thanks to SHEN Jui-chen (3068/3843/3791) for participating in the work.

Authors' Affiliation: Both of Institute of Experimental Biology, Chinese Academy of Sciences, Shanghai.

CHU Jun (2612/3387)  
LU Shu-hsia (0712/3219/7209)

"Effects of X-rays on the Growth, Maturation, and Fertility in Rats Irradiated at Seventh Day After Birth V. Development of the Testis"

Peiping, Shih-yen Sheng-wu Hsueh-pao (Acta Biologiae Experimentalis Sinica), Vol 8, No 2, May 63, pp 222-229

Abstract: English abstract accompanies this article.

The authors express thanks to WANG Chueh (3769/3778) for participating in the work.

Authors' Affiliation: Both of Institute of Experimental Biology, Chinese Academy of Sciences, Shanghai.

TS'ENG Mi-pai (2582/1736/4101)

"On the Reactive Capacity of the Urodelian Ectoderm During Gastrulation"

Peiping, Shih-yen Sheng-wu Hsueh-pao (Acta Biologiae Experimentalis Sinica), Vol 8, No 2, May 63, pp 230-238

Abstract: English abstract accompanies this article.

The author expresses thanks to CH'EN Yuan-feng (7115/0337/7685) for providing the cross-sections and to MO Hui-ying (5459/1979/5391) for his photographs.

This paper was received for publication on 30 November 1962.

Author's Affiliation: Institute of Experimental Biology, Chinese Academy of Sciences, Shanghai.

C-O-N-F-I-D-E-N-T-I-A-L

LIN Fei-ch'ing (2651/7378/0615)  
CHIANG Hui-hui (5592/1979/1920)  
WEN Yu-mei (5113/3768/2734)

"Preliminary Study on the Specific Antigen of Ehrlich Ascites Tumor"

Peiping, Shih-yen Sheng-wu Hsueh-pao (Acta Biologiae Experimentalis Sinica), Vol 8, No 2, May 63, pp 245-250

Abstract: English abstract accompanies this article.

This paper was received for publication on 24 December 1962.

Authors' Affiliation: All of Shanghai First Medical College.

NI Chin-shan (0242/2516/1472)  
CHIAO Hsin-chih (3542/2450/0037)

"Application of Oxygen Electrode for Continuous Measurement of Root Respiration"

Peiping, Shih-yen Sheng-wu Hsueh-pao (Acta Biologiae Experimentalis Sinica), Vol 8, No 2, May 63, pp 258-264

Abstract: English abstract accompanies this article.

This paper was received for publication on 3 December 1962.

Authors' Affiliation: Both of Institute of Plant Physiology, Chinese Academy of Sciences, Shanghai.



LIANG Chih-an (2733/0037/1344)

"Acoustic Basis for Tone Recognition in Chinese Syllables"

Peiping, Sheng-li Hsueh-pao (Acta Physiologica Sinica), Vol 26,  
No 2, Jun 63, pp 85-91

Translation of Russian Abstract: This paper investigates information distribution in the tone of a Chinese (Peiping) syllable and the basis for recognizing this tone. It is ascertained that the fundamental frequency of the voice /cord tone/ is not the sole carrier of information in the tone of a syllable and that tone information is widely distributed in every structure of the syllable. When the cord tone is not present, as in the case of whispered speech, as well as in filter cut-off frequencies lower than 300 cycles per second, tone intelligibility in the syllables remains sufficiently high. Tones are sustained to a high degree also when a single cord tone, either the first or second formant, remains in the syllables. Possible methods were considered concerning carrier information in a tone in various components of a syllable.

This paper was received for publication on 8 June 1962.

Author's Affiliation: Institute of Physiology, Chinese Academy of Sciences, Shanghai.

LIANG Chih-an (2733/0037/1344)

"Aspiration of Consonants and Acoustic Recognition"

Peiping, Sheng-li Hsueh-pao (Acta Physiologica Sinica), Vol 26,  
No 2, Jun 63, pp 93-99

Translation of Russian Abstract: An experiment was conducted for acoustically ascertaining the degree of aspiration of consonants and how aspirated consonants are distinguished from unaspirated in the acoustic system. From the derived data, it was concluded that this degree depends mainly on the duration of the noise produced in pronouncing the given consonant. The duration of the noise (duration of the explosion for explosives) in aspirated consonants is greater than in the unaspirated. Auditory distinguishing of aspirated and unaspirated consonants depends precisely on this duration factor. It was demonstrated that the Russians have poor recognition of aspirate consonants, whereas the Chinese recognize them with ease.

Part of the work on this paper was completed at the Pavlov Institute of Physiology, Academy of Sciences USSR.

This paper was received for publication on 8 June 1962.

Author's Affiliation: Institute of Physiology, Chinese Academy of Sciences, Shanghai.

LIANG Chih-an (2733/0037/1344)

"Characteristics of Acoustic Recognition of Russian Explosives in Syllables by the Chinese"

Peiping, Sheng-li Hsueh-pao (Acta Physiologica Sinica), Vol 26, No 2, Jun 63, pp 100-107

Translation of Russian Abstract: Great interest is being evidenced in explaining the process for the Chinese to recognize resonance of Russian explosives in their own language which lacks given signs for such consonants. It was demonstrated that when syllables are rapidly repeated, the Chinese cannot distinguish the fundamental tone of the voice in the explosive. However, the Chinese readily perceive the resonance segment as a physical signal distinctly expressed in the cut-off period for maintaining the explosive in the reproduced syllable from the explosive of the original one. Special study is required to introduce such a physical signal into the storehouse of signals effective for the speech system. This requires relating

(continued)

this signal to some other in the native language by a known complex of articulation movements. It is probable that this relation will be soon established. However, more time is required to develop the complex of articulation movements which correspond precisely to the reproduced signal. The derived facts emphasize that recognition of articulation movements is an important link in the process of speech sound recognition. During rapid repetition, the test subject can reproduce the cord tone of the explosive in less time for maintaining the sound than the duration of the entire consonant. This attests that the smallest units of classification in speech sounds in the auditory system are not phonemes, but some of their parameters.

Part of the work was completed at Pavlov Institute of Physiology, Academy of Sciences USSR.

The paper was received for publication on 8 June 1962.

Author's Affiliation: Institute of Physiology, Chinese Academy of Sciences, Shanghai.

HAN Jui (7281/6904)

"Investigation on the Pharmacology of Antitumor Preparations:  
6. Effect of Certain Antitumor Preparations on the Carbohydrate  
Metabolism of Tumor Cells"

Peiping, Sheng-li Hsueh-pao (Acta Physiologica Sinica), Vol 26,  
No 2, June 63, pp 136-141

Translation of Russian Abstract: The Warburg apparatus was used to investigate the effect of nitromine, sarcolysin, N-formylsarcolysin, sarcolysin peptide, and 6-mercaptopurine on the respiration and aerobic and anaerobic glycolysis of ascites cells of Yosid sarcoma. Their antitumor action was also studied. This paper examines the interrelationship between the medical effect of drugs and their effect on carbohydrate metabolism. In vitro tests, nitromine evokes inhibitory respiration in Ehrlich ascites tumor cells, but it does not have a noticeable effect on carbohydrate metabolism in the Yosid carcinoma cells. In both in vitro and in vivo experiments, sarcolysin does not exert a real effect on carbohydrate metabolism in two types of tumors. In the absence of sarcolysin, Nformylsarcolysin in vivo promotes an increase in respiration of Yosid ascites carcinoma cells. It has no effect on glycolysis. It was proved that sarcolysin peptide in doses of 800 milligrams per kilogram weight causes inhibition of anaerobic glycolysis,

(continued)

but has no effect on respiration and aerobic glycolysis of Yosid ascites carcinoma cells. Six-mercaptopurine distinctly reduces anaerobic glycolysis, but has no real effect on respiration and aerobic glycolysis of Yosid sarcoma.

This paper was completed under the guidance of LEI Mai-p'eng (7191/3189/7720).

This paper was received for publication on 24 October 1962.

Author's Affiliation: Pharmacology Section, Institute of Materia Medica, Chinese Academy of Medical Sciences, Peiping.

C-O-N-F-I-D-E-N-T-I-A-L

WANG K'un-jen (3076/1024/0088)  
CHANG Jen-hua (1728/4771/5478)  
CHANG Hua-hsing (1728/5478/2502)  
HSU Ying-chieh (1776/5391/0267)

"Correlated Histological, Histochemical, and Biochemical Studies  
on Zymogen Granules, RNA, and the Three Principal Digestive Enzymes  
in the Mouse Pancreas During Its Secretory Cycle"

Peiping, Sheng-li Hsueh-pao (Acta Physiologica Sinica), Vol 26,  
No 2, Jun 63, pp 108-117

Abstract: English abstract accompanies this article.

This paper was received for publication on 9 October 1962.

Authors' Affiliation: All of Department of Biology, Peking Normal  
University and Department of Physiology, Institute of Experimental  
Medicine, Chinese Academy of Medical Sciences, Peiping.

YU Yu-wen (2456/3022/2429)  
SHAO Chin-ying (6730/6855/7727)  
SUNG Chen-yu (1345/2182/3768)

"Studies on Oral Diuretics III. Characteristics of the Dispositions  
of Some Sulfonamide Diuretics and Their Relationships to Diuretic  
Actions"

Peiping, Sheng-li Hsueh-pao (Acta Physiologica Sinica), Vol 26,  
No 2, Jun 63, pp 119-127

Abstract: English abstract accompanies this article.

The authors express thanks to LEI Hai-p'eng (7191/3189/7720) and  
CHIN Yin-ch'ang (6855/5593/2490) for their corrections.

This paper was received for publication on 4 October 1962.

Authors' Affiliation: All of Department of Pharmacology, Institute  
of Materia Medica, Chinese Academy of Medical Sciences, Peiping.

YU Yu-wen (2456/3022/2429)  
SHAO Chin-ying (6730/6855/7727)  
SUNG Chen-yu (1345/2182/3768)

"Studies on Oral Diuretics IV. Studies on the Uptake of Some Sulfonamide Diuretics by Rat Renal Slices"

Peiping, Sheng-li Hsueh-pao (Acta Physiologica Sinica), Vol 26, No 2, Jun 63, pp 127-134

Abstract: English abstract accompanies this article.

The authors express thanks to SUN Jun-hua (1327/3387/5478) for participation in part of the technical work and to LEI Hai-p'eng (7191/3189/7720) and CHIN Yin-ch'ang (6855/5593/2490) for their corrections.

This paper was received for publication on 14 October 1962.

Authors' Affiliation: All of Department of Pharmacology, Institute of Materia Medica, Chinese Academy of Medical Sciences, Peiping.

TSOU Kang (6760/1481)

"Effects of Morphine Upon Several Types of Operant Conditioning in the Rat"

Peiping, Sheng-li Hsueh-pao (Acta Physiologica Sinica), Vol 26, No 2, Jun 63, pp 143-149.

Abstract: English abstract accompanies this article.

The author expresses thanks to CHANG Ch'ang-shao (1728/2490/4801) for his guidance and LU Jung-fa (7120/2837/4099) for participating in part of the technical work.

Parts of this paper were in the 1960-nien Shang-hai Shih K'o-hsueh Chih-shu Lun-wen Hsuan-chi I Yao Wei-sheng Fen-ts'e (Medical Sciences Section of the Collected Shanghai Scientific and Technical Papers of 1960); this paper was read at the 3 December 1961 Shanghai Physiology Science Conference; it was received for publication on 2 November 1962.

Authors Affiliation: Institute of Materia Medica, Chinese Academy of Sciences, Shanghai.

C-O-N-F-I-D-E-N-T-I-A-L

HO K'ai-ling (0149/7030/3781)  
LI Liang (2621/0081)  
LU I-chuan (0712/2034/1227)  
SHAO Kuang-ti (6730/0342/4574)

"A Study with S<sup>35</sup>-Methionine on the Mechanism of Hypoalbuminemia in Late Stage Schistosomiasis"

Peiping, Sheng-li Hsueh-pao (Acta Physiologica Sinica), Vol 26, No 2, Jun 63, pp 151-155

Abstract: English abstract accompanies this article.

The authors express thanks to HO Lei-ti (0149/5628/5530) and CHEN Hui-fen (3088/1979/5358) for their help in the technical work.

This paper was received for publication on 6 December 1962; this paper was read at the 1960 annual meeting of the Shanghai Biochemistry Society; an abstract of this paper was published in Chung-kuo Sheng-li Hsueh-hui Sheng-wu Hua-hsueh Yen-chiu Lun-wen Chai-yao (Abstracts of Biochemical Research Papers, Chinese Physiology Society).

Authors' Affiliation: All of Biochemistry Teaching and Research Section, Shanghai First Medical College; LU now at Biochemistry

(continued)

Teaching and Research Section, Chungking Medical College; SHAO now at Biochemistry Teaching and Research Section, Dairen Railway Medical College.

C-O-N-F-I-D-E-N-T-I-A-L

CHU Ch'iao-chen (2612/1564/6297)  
WANG Hsiao-lu (3769/1321/6424)  
TING Kuang-sheng (0002/0342/3932)

"Effects of Guanethidine and Reserpine on Epinephrine Liberation and Renal Function in Cats"

Peiping, Sheng-li Hsueh-pao (Acta Physiologica Sinica), Vol 26, No 2, Jun 63, pp 157-163

Abstract: English abstract accompanies this article.

The authors express thanks to CH'EN Li-hsin (7115/4539/0207) and CHU Ming-k'ang (2612/2494/1660) for their participation in the technical work.

This paper was received for publication on 24 December 1962; it was read at the 25 November 1962 Shanghai Municipal Physiology Science Conference.

Authors' Affiliation: All of Institute of Materia Medica, Chinese Academy of Sciences, Shanghai.

CHANG Ching-ju (1728/6975/1172)

"Interaction of Evoked Cortical Potentials in the Rabbit"

Peiping, Sheng-li Hsueh-pao (Acta Physiologica Sinica), Vol 26, No 2, Jun 63, pp 165-170

Abstract: English abstract accompanies this article.

The author expresses thanks to Prof CHANG Hsiang-t'ung (1728/7449/2717) of the Institute of Physiology, Chinese Academy of Sciences, for his guidance.

This paper was received for publication on 14 January 1963.

Author's Affiliation: Physiology Teaching and Research Section, Shanghai First Medical College, Shanghai.

C-O-N-F-I-D-E-N-T-I-A-L

CHIANG Wen-te (3068/2429/1795)  
CHANG An-chung (1728/1344/0022)  
CH'U Yun-hung (5969/0061/7703)  
CHANG Ch'ang-shao (1728/2490/4801)

"The Effect of Potassium Antimony Tartrate on Electrically Induced Ventricular Fibrillation in Anesthetized Rabbits"

Peiping, Sheng-li Hsueh-pao (Acta Physiologica Sinica), Vol 26, No 2, Jun 63, pp 172-179

Abstract: English abstract accompanies this article.

This paper was received for publication on 18 January 1963.

Authors' Affiliation: All of Pharmacology Teaching and Research Section, Shanghai First Medical College.

FAN Shih-fan (5400/0013/5672)

"The Effect of Stretching on the Extractability of Protein From the Myofibril of Honey Bee Striated Muscle by Potassium Iodide"

Peiping, Sheng-li Hsueh-pao (Acta Physiologica Sinica), Vol 26, No 2, Jun 63, pp 181-187

Abstract: English abstract accompanies this article.

This paper was received for publication on 21 January 1963.

Author's Affiliation: Institute of Physiology, Chinese Academy of Sciences, Shanghai.



LIU Yu-min (0491/5148/3046)  
LI Chen-yuan (2621/7201/0337)

"An Anomaloscope Study of Anomalous Trichromats With Special Reference to Their Relative Spectral Sensitivity Curve"

Peiping, Sheng-li Hsueh-pao (Acta Physiologica Sinica), Vol 26, No 2, Jun 63, pp 189-200

Abstract: English abstract accompanies this article.

This paper was received for publication on 1 March 1963.

Authors' Affiliation: Both of Institute of Physiology, Chinese Academy of Sciences, Shanghai.

LIU Yu-min (0491/5148/3046)  
SHIH Wen-lung (2457/7201/7893)

"A Multiple Use Experimental Apparatus for the Physiology of Visual Perception"

Peiping, Sheng-li Hsueh-pao (Acta Physiologica Sinica), Vol 26, No 2, Jun 63, pp 202-204

Abstract: Not given.

This paper was received for publication on 1 March 1963.

Authors' Affiliation: Both of Institute of Physiology, Chinese Academy of Sciences, Shanghai.

HOU Tsung-lien (0186/1350/3425)

"Indexes That Correctly Reflect Excitability and Separate [Abnormal] Irritability From Excitability"

Peiping, Sheng-li Hsueh-pao (Acta Physiologica Sinica), Vol 26, No 3, Sep 63, pp 282-290

Abstract: Taking Hoorweg and Weiss Formulas  $i = \frac{a}{t} + b$  which were found in Schriever, H.: "Research on the Electrical Excitability of the Sensory Nerves, 2d Report," Z. Biol., 1930, 90, 383, and changed to  $i - b = \frac{a}{t}$  and brought up that  $i - b$  and  $a/t$  were the same thus;  $i - b = 1$  changing to  $i - 1 = b$  and from this analysis, the electric current strengthened  $i$  and possible the parts  $b$  and  $1$ .

There was controversy on the methods and views in the paper at the Physiology Symposium on Nerve Systems during the June 1962 Physiology and Pharmacology Scientific and Technical Conference. The first draft of this paper was received on 14 April 1959, and the final draft was received on 28 May 1963.

Author's Affiliation: Physiology Teaching and Research Section, Sian Medical College.

LIU Ch'iu (0491/3808)

"Effects of Sodium Bromide and Caffeine on the Induction of Pituitary Adenomas by Estrogen in Chinese Hamsters"

Peiping, Sheng-li Hsueh-pao (Acta Physiologica Sinica), Vol 26, No 3, Sep 63, pp 205-210

Abstract: English abstract accompanies this article.

The author expresses thanks to Prof LI Ming-hsin (2621/6900/2450) under whose guidance this paper was done. Part of research was done in 1957.

This paper was received for publication on 8 November 1962.

Author's Affiliation: Institute of Physiology, Chinese Academy of Medical Sciences, Peiping; current mailing address is Institute of Biophysics, Chinese Academy of Sciences, Peiping.

FAN Shih-fan (5400/0013/5672)  
CH'EN K'o-fei (3088/0344/7378)

"Cortical Responses to Repetitive Contralateral Stimulation After  
Sectioning of the Corpus Callosum"

Peiping, Sheng-li Hsueh-pao (Acta Physiologica Sinica), Vol 26,  
No 3, Sep 63, pp 211-216

Abstract: English abstract accompanies this article.

This paper was received for publication on 12 November 1962.

Authors' Affiliation: Both of Institute of Physiology, Chinese  
Academy of Sciences, Shanghai.

YU Shu-jen (0060/3412/0088)  
FENG I-p'u (7458/0076/3877)  
CHIN Yin-ch'ang (6855/5593/2490)  
MA Wan-chu (7456/1354/3796)

"Pharmacological Studies on Chinese Rauwolfia. VI. Renal Hemodynamic  
Effects of the Alkaloid of Mainandao Roots in Unanesthetized Normal  
and Hypertensive Dogs"

Peiping, Sheng-li Hsueh-pao (Acta Physiologica Sinica), Vol 26,  
No 3, Sep 63, pp 218-224

Abstract: English abstract accompanies this article.

The authors express thanks to the Statistical Office of the Chinese  
Academy of Medical Sciences for the statistical portion of this  
paper.

This paper was received for publication on 20 November 1962.

Authors' Affiliation: All of Department of Pharmacology, Institute  
of Materia Medica, Chinese Academy of Medical Sciences, Peiping;  
the current mailing address for MA is Institute of Traditional  
Medicine and Pharmacology, Chinese Academy of Medical Sciences,  
Chungking Branch.

CHIANG Chen-yu (3068/2182/5940)  
LO Ch'ih-piao (5012/3589/7009)

"Effects of Decerebration and Deafferentation on Blood Pressure  
in Toads"

Peiping, Sheng-li Hsueh-pao (Acta Physiologica Sinica), Vol 26, No 3,  
Sep 63, pp 226-231

Abstract: English abstract accompanies this article.

This paper was received for publication on 6 December 1962.

Authors' Affiliation: Both of Institute of Physiology, Chinese  
Academy of Sciences, Shanghai.

YAO T'ai (1202/3141)

"Respiratory Rhythm of the Discharges in the Cervical Sympathetic  
Trunk in Rabbit"

Peiping, Sheng-li Hsueh-pao (Acta Physiologica Sinica), Vol 26,  
No 3, Sep 63, pp 232-238

Abstract: English abstract accompanies this article.

This paper was prepared under the guidance of Prof HSU Feng-yen  
(1776/0023/1750).

This paper was received for publication on 12 February 1963.

Author's Affiliation: Physiology Teaching and Research Section,  
Shanghai First Medical College.

FAN Shih-fan (5400/0013/5672)

"The Dichroism of Congo Red Stained Toad and Honey Bee Striated Muscles"

Peiping, Sheng-li Hsueh-pao (Acta Physiologica Sinica), Vol 26, No 3, Sep 63, pp 240-250

Abstract: English abstract accompanies this article.

This paper was received for publication on 14 February 1963.

Author's Affiliation: Institute of Physiology, Chinese Academy of Sciences, Shanghai.

CHANG Ying-ts'ai (1728/7183/5387)

LIU Ts'eng-fu (0491/2582/1788)

WANG Yu-jo (3769/7183/5387)

CHAO Tzu-tung (6392/4793/2639)

"The Inhibition of Cortically Induced Jaw Movements by Stimulation of the Vagus Nerve"

Peiping, Sheng-li Hsueh-pao (Acta Physiologica Sinica), Vol 26, No 3, Sep 63, pp 251-256

Abstract: English abstract accompanies this article.

This paper was received for publication on 20 February 1963.

Authors' Affiliations: CHANG and LIU of Physiology Teaching and Research Section, Peking Second Medical College; WANG and CHAO of Physiology Teaching and Research Section, Loyang Medical College.

MEI Chen-t'ung (2734/6966/1749)  
YU Hui-chung (0060/1920/1813)

"On the Monocular Conditioned Reflex in the Pigeon"

Peiping, Sheng-li Hsueh-pao (Acta Physiologica Sinica), Vol 26,  
No 3, Sep 63, pp 258-261

Abstract: English abstract accompanies this article.

CHENG Chin-Tse (6774/6855/3419) participated in part of the research work.

This paper was received for publication on 22 March 1963.

Authors' Affiliation: All of Institute of Physiology, Chinese Academy of Sciences, Shanghai.

CHI Hsiu-chuan (4694/4423/1227)  
WANG Chen-kang (3769/2182/4854)  
HAN Jui (7281/6904)

"The Effect of N-Formyl-Ssarcolysin Upon P<sup>32</sup> Incorporation Into Nucleic Acids of Normal Tissues and Transplantable Tumors"

Peiping, Sheng-li Hsueh-pao (Acta Physiologica Sinica), Vol 26,  
No 3, Sep 63, pp 264-269

Abstract: English abstract accompanies this article.

The authors express thanks to Professors CHIN Yin-ch'ang (6855/5593/2490), SUNG Chen-yu (1345/2182/3768), and LEI Hai-p'eng (7191/3189/720) for their valuable opinions and to TS'AO Fu-chen (2580/4395/3791) for his technical assistance.

This paper was received for publication on 9 April 1963.

Authors' Affiliation: All of Department of Pharmacology, Institute of Materia Medica, Chinese Academy of Medical Sciences, Peiping; the current mailing address for WANG is Pharmacology Teaching and Research Section, China Medical University, Peiping.

HAN Te-wu (7281/1795/0063)  
Hervath, Sz.  
Rigo, J.

"The Functional State of Thyroid and the Level of Free Tyrosine in Thyroid Gland and in Plasma"

Peiping, Sheng-li Hsueh-pao (Acta Physiologica Sinica), Vol 26,  
No 3, Sep 63, pp 271-274

Abstract: English abstract accompanies this article.

This paper was received for publication on 9 April 1963.

Authors' Affiliation: All of Institute of Pathophysiology, Medical School, University of Budapest; the current mailing address of HAN is Pathophysiology Teaching and Research Section, Shansi Medical College.

CHANG K'o-p'ang (1728/0344/1690)  
CH'EN Hsiu-fang (7115/4423/5364)

"Distribution of Glutamic Acid Decarboxylase, r-Aminobutyrate-a-Ketoglutarate Transaminase, and r-Aminobutyric Acid and Their Relationships in the Rat Brain"

Peiping, Sheng-li Hsueh-pao (Acta Physiologica Sinica), Vol 26,  
No 3, Sep 63, pp 275-281

Abstract: English abstract accompanies this article.

CH'EN Sen-shen (6929/2773/3947) participated in the technical work.

This paper was received for publication on 29 April 1963.

Authors' Affiliation: Both of Institute of Physiology, Chinese Academy of Sciences, Shanghai.

WANG Su (3769/3936)

"The Effect of Manual Muscular Work on the Size-Weight Illusion"

Peiping, Hsin-li Hsueh-pao (Acta Psychologica Sinica), No 2, 25 May 63, pp 81-87

Translation of Russian Abstract: Ergographic manual work (size 2 kg/ 50 cm) is tested on a fixed apparatus in a simulated experiment between control and critical experiments. When the work is performed with one hand, a change in the relationship of assimilated and contrasted size-weight illusions is induced on the test subjects, as compared with the absence of such work. At the same time, there appears a contradictory normal size-weight illusion. The author suggests that these phenomena are related to dual performance of both hemispheres of the brain.

This paper was received for publication on 18 February 1963.



LU Chung-heng (4151/0112/5899)  
YING Yu-yeh (2019/3768/5509)  
CHANG Mei-ling (1728/2734/3781)  
HUNG T'ieh-lun (3163/6993/0243)  
YEN Hui-fen (7027/1979/5358)

"An Experimental Study of the Effects of Different Methods of Teaching on the Formation of Fundamental Geometrical Concepts"

Peiping, Hsin-li Hsueh-pao (Acta Psychologica Sinica), No 2, 25 May 63, pp 88-97

Translation of Russian Abstract: The purpose of this paper is to compare three methods of teaching: direct exposition of essential signs, application of figure variants, and the combination of these two methods. (1) Direct exposition of essential signs and application of figure variants afford the best results in teaching basic concepts. This is not only useful for correct statement of the concept, but also for correct judgment of figures and correct solution of the problem. (2) In teaching basic concepts, the direct exposition of essential signs has a greater effect than the application of figure variants. In teaching simpler concepts, there is no marked distinction between direct exposition of essential signs and its combination with figure variants. However, in teaching more complex concepts, the latter produces

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better results than the former. (3) Direct exposition of essential signs does not always have a positive effect. Excessive application promotes stereotype thinking in the pupils and hinders the development of their capability for analysis and general conclusion. (4) The statement of concepts, the judgment of figures, and the solution of problems are interrelated, but there are many exceptions.

The authors acknowledge that experiments were carried out at Hei-shan Pei-kuan (7815/1472/0554/7070) Experimental School and at the middle school attached to Liaoning Teachers College. Teaching at Hei-shan Pei-kuan Experimental School was carried out by HUNG and at the middle school attached to Liaoning Teachers College by YEN.

This paper was received for publication on 21 January 1963.

CH'IU Hsueh-hua (6726/1331/5478)

"A Study on the Skill of Calculation With Abacus in School Children"

Peiping, Hsin-li Hsueh-pao (Acta Psychologica Sinica), No 2, 25 May 63, pp 106-111

Excerpts of Russian Abstract: The purpose of this paper is: (1) to investigate mental characteristics in training children to perform calculations on an abacus and the process of habit formation in manipulating an abacus and (2) to submit experimental data which are of practical value in this training and which will aid child psychology to explain habit formation, as well as to present an opportunity to investigate problems on the mutual coordination and harmony of muscular and mental performance. The authors elaborate in three paragraphs the data derived from training experiments in lessons and experimental data on systematic research on individual children.

This paper was received for publication on 13 September 1962.

LU Ching (0712/7234)

WANG Wen-yun (3076/2429/9462)

"The Thinking Processes in Arithmetical Operation in Lower-grade School Children"

Peiping, Hsin-li Hsueh-pao (Acta Psychologica Sinica), No 2, 25 May 63, pp 121-129

Excerpts of Russian Abstract: This paper discusses (1) a study on thinking mobility in children when solving applied problems and (2) analysis of mental factors and thinking characteristics which block thinking mobility. Training experiments demonstrate that the lack of thinking mobility in a child is related to five interrelated psychic factors and thinking characteristics listed in the abstract. These factors and characteristics are also highly important in studying psychological characteristics of elementary school children.

The authors express thanks to HU Shao-yueh (5170/4801/2588) of Pao-shu-t'a (0202/0209/1044) Elementary School for his guidance in the research and to teachers CHENG Yueh-tan (6774/2588/2481), JEN Su-lang (0117/4790/5364), and SUNG Ch'ing-lan (1345/1987/5695) for their assistance and to Prof CH'EN Li (7115/4539) for his directions.

This paper was received for publication on 4 September 1962.

LIN Feng-tsao (2651/7685/5679)

"A Case Study on Preschool Child Learning To Recite Classical Poetry and Prose"

Peiping, Hsin-li Hsueh-pao (Acta Psychologica Sinica), No 2, 25 May 63, pp 98-105

Abstract: English abstract accompanies this article.

LIN Chung-hsien (2651/0112/6343)

"Some Factors Affecting the Observation of Stimuli From Different Directions"

Peiping, Hsin-li Hsueh-pao (Acta Psychologica Sinica), No 2, 25 May 63, pp 113-120

Abstract: English abstract accompanies this article.

This paper was received for publication on 21 January 1963.

KUNG Yao-hsien (7895/5069/0341)

"Free Association Test and Its Clinical Application (I)"

Peiping, Hsin-li Hsueh-pao (Acta Psychologica Sinica), No 2, 25 May 63, pp 130-136

Abstract: English abstract accompanies this article.

The author expresses thanks to CH'EN Sheng-chieh (7115/4141/2638) of the Education Department, Central China Teachers College, for participating in the work.

This paper was received for publication on 28 October 1962.

KUNG Yao-hsien (7895/5069/0341)

"Free Association Test and Its Clinical Application (II)"

Peiping, Hsin-li Hsueh-pao (Acta Psychologica Sinica), No 2, 25 May 63, pp 137-145

Abstract: English abstract accompanies this article.

The author expresses thanks to CH'ENG Chia-yu (2052/0502/0147) of a sanatorium in Wuhan for participating in the work.

This paper was received for publication on 28 October 1962.

P'ENG Jui-hsiang (1756/3843/4382)

"Relative Responses to Compound Stimuli in Dogs"

Peiping, Hsin-li Hsueh-pao (Acta Psychologica Sinica), No 2, 25 May 63, pp 146-154

Abstract: English abstract accompanies this article.

The author expresses thanks to CHU Hsin-ming (2612/2450/2494) for participating in the research.

This paper was received for publication on 30 July 1962.

CH'EN Chung-keng (7115/0112/1649)

"Some Psychopathological Thoughts in the Book of TSO Ch'uan (1563/0278)"

Peiping, Hsin-li Hsueh-pao (Acta Psychologica Sinica), No 2, 25 May 63, pp 156-164

Abstract: English abstract accompanies this article.

The author expresses thanks to Prof MENG T'ang-yuen (5536/0781/6885) for assisting throughout several revisions.

This paper was received for publication on 7 September 1962.

CH'EN Yung-lin (7115/3057/2651)  
SUNG Shao-tsung (1345/4801/1350)  
TENG Hsiao-shan (6772/1420/1472)

"Preliminary Observation of Insect Migration Over the Gulf of Chihli and the Yellow Sea in China"

Peiping, K'un-ch'ung Hsueh-pao (Acta Entomologica Sinica), Vol 12, No 2, May 63, pp 137-147

Excerpts of Russian Abstract: This paper discusses some results of observations on insect migration over the Gulf of Chihli and the Yellow Sea in China during 1961. The materials were collected by coworkers from the Institute of Zoology, Chinese Academy of Science, and the Lu-ta Agricultural Institute. The authors express thanks to the specialists for determining a number of insect species. The article lists 53 species of migratory insects which belong to orders and 22 families. Many of the 53 species are destructive of crops. The abstract lists some of these pests. It was established that May-June and mid-September are the major periods for the insect migration, which is definitely related to climatic conditions, wind direction, etc. The distance of various migratory insects from the shore varies; it is about 300 km for *Parnara guttata* Bremer et Grey and 30-150 km for the majority.

(continued)

Prof MA Shih-chun (7456/0013/7486), Institute of Entomology, Chinese Academy of Sciences, directed the research. Prof CHU Hung-fu (2612/1738/1788) offered many invaluable views.

References: Of the 20 references used, all were English except 3 Chinese and one Russian.

C-O-N-F-I-D-E-N-T-I-A-L

CHAO Chien-ming (6392/1696/6900)

"Materials on the Fauna Tachina (Larvaevoridae) of China: 4. Genus Hemipeletieria Zimin"

Peiping, K'un-ch'ung Hsueh-pao (Acta Entomologica Sinica), Vol 12, No 2, May 63, pp 220-223

Excerpts of Russian Abstract: This paper examines five species within the genus Hemipeletieria Zimin, two of which are new forms identified as (1) Hemipeletieria trifurca Chao, sp.n. and (2) Hemipeletieria fuscata Chao sp.n. The abstract details the physical characteristics of these two species.

This paper was received for publication on 4 June 1962.

Author's Affiliation: Institute of Zoology, Chinese Academy of Sciences.

LU Huan (0205/3220)  
HSU Shu-jen (1776/2885/0086)  
LU Hsiu-ch'ien (7120/4423/3830)

"Studies on Insecticide Resistance in Mosquitos"

Peiping, K'un-ch'ung Hsueh-pao (Acta Entomologica Sinica), Vol 12, No 2, May 63, pp 163-165

Text of English Abstract: A survey on the resistance of the larvae of the common mosquito, *Culex pipiens pallens* Coquillett, to DDT and BHC was carried out, during July-September 1960, in more than ten regions of several provinces in central and north China. After the determining of the susceptibility of the early stage of the fourth instar larvae of this species to these two insecticides, it was shown that the insecticide resistance of this species, at different degrees, had been established in the regions where DDT and BHC were applied for about 5 years in succession. The resistance of this species to the insecticides in above-mentioned regions was found to be 3-18 times more to DDT and 2-5 times more to BHC than that of the normal strains in our laboratory.

References: Six English, one of which was written by a Chinese, and one Chinese.

This paper was received for publication on 4 September 1961.

Authors' Affiliation: All of Institute of Parasitic Diseases, Chinese Academy of Medical Sciences.

WANG T'un-ch'ing (3769/2415/3237)

"Records of Five Species of *Haemolaelaps* Berlese, 1910 (Acarina: Laelaptidae) From Fukien, China"

Peiping, K'un-ch'ung Hsueh-pao (Acta Entomologica Sinica), Vol 12, No 2, May '63, pp 199-207

Excerpts of English Abstract: This paper reports five species of *Haemolaelaps* Berlese, 1910 from Fukien, China. *Haemolaelaps liae*, *Haemolaelaps chinensis*, and *Haemolaelaps triangularis* are regarded as new species.

A. A. Zemskaya furnished control specimens.

This paper was received for publication on 14 February 1962.

Author's Affiliation: Fukien Research Institute of Epidemic Diseases.

P'U Mao-hua (3184/5399/5478)

"A Preliminary Study on the Small Brown Planthopper, *Delkhacodes striatella*, Fallen in South Kiangsu"

Peiping, K'un-ch'ung Hsueh-pao (Acta Entomologica Sinica), Vol 12, No 2, May '63, pp 117-135

Abstract: English abstract accompanies this article.

IAN Yu (2651/6735) and WU Chung-lin (0702/0022/2651) of the Kiangsu Branch, Chinese Academy of Sciences, directed many aspects of this work. TS'AI Pang-hua (5591/6721/5478), deputy director of the Institute of Entomology, Chinese Academy of Sciences, identified the specimen upon request of CHU Hung-fu (2621/1738), also a deputy director of the same institute.

References: All 16 references were either Chinese or Japanese.

This paper was received for publication on 7 May 1962

Author's Affiliation: Soochow Agricultural Research Institute, Kiangsu.



C-O-N-F-I-D-E-N-T-I-A-L

LU Pao-lin (7120/1405/7792)  
KAO Chu-chen (7559/6880/6966)  
CHANG Ping-chai (17284426/7872)  
LIU Chi-ying (2692/2388/5391)

"Studies on the Behavior of Anopheles Sinensis Wiedemann, 1828, A. Jeyporiensis Candidiensis Koidzumi, 1924, and A. Minimus Theobald, 1901 in DDT and BHC Treated Huts"

Peiping, K'un-ch'ung Hsueh-pao (Acta Entomologica Sinica), Vol 12, No 2, May 63, pp 149-160

Abstract: English abstract accompanies this article.

References: Of the 23 references listed, all were English except Russian and 4 Chinese.

This paper was received for publication on 26 July 1962.

TS'AI Pang-hua (5591/6721/5478)  
CH'ENG Ning-sheng (7115/1380/3932)

"New Termites From South China"

Peiping, K'un-ch'ung Hsueh-pao (Acta Entomologica Sinica), Vol 12, No 2, May 63, pp 167-195

Abstract: English abstract accompanies this article.

This paper was received for publication on 19 June 1962.

Authors' Affiliation: Both of Institute of Zoology, Chinese Academy of Sciences.

C-O-N-F-I-D-E-N-T-I-A-L

SUN Hsiang-chun (1327/6272/6874)

"A Preliminary Study of the Life History and Chemical Control of the Peach Leaf Hopper, *Erythroneura* Sp., in Kiangsu"

Peiping, K'un-ch'ung Hsueh-pao (Acta Entomologica Sinica), Vol 12, No 2, May 63, pp 209-218

Abstract: English abstract accompanies this article.

Prof TSOU Chung-lin (6760/6945/3829) directed the research and Prof HUANG Chu-lin (7806/0366/2651) and Prof YU Tzu-p'ing (1992/1311/1627) directed the classification and chemical control.

This paper was received for publication on 14 March 1962.

Authors' Affiliation: Soochow Agricultural School, Kiangsu.

TENG Kuo-fan (6772/0948/5672)

"A New Species of the Genus *Dermacentor* (Ixodidae)

Peiping, K'un-ch'ung Hsueh-pao (Acta Entomologica Sinica), Vol 12, No 2, May 63, pp 225-227

Abstract: English abstract accompanies this article.

This paper was received for publication on 23 June 1962.

Author's Affiliation: Institute of Zoology, Chinese Academy of Sciences.

HSU Chi-feng (1776/0796/0023)

"A New Species of Culex From Hainan Island"

Peiping, K'un-ch'ung Hsueh-pao (Acta Entomologica Sinica), Vol 12,  
No 2, May 63, pp 229-231

Abstract: English abstract accompanies this article.

Prof HO Ch'i (0149/3823), Institute of Parasitic Diseases, Chinese  
Academy of Medical Sciences checked the manuscript.

This paper was received for publication on 9 July 1962.

CHOW Te-wen (0719/1795/2429)

"A Preliminary Study on the Species Composition and Seasonal Prevalence  
of the Fly Population in Tsinan"

Peiping, K'un-ch'ung Hsueh-pao (Acta Entomologica Sinica), Vol 12,  
No 2, May 63, pp 233-241

Abstract: English abstract accompanies this article.

This paper was received for publication on 27 March 1962.

C-O-N-F-I-D-E-N-T-I-A-L

SHEN Kung-mou (3088/7255/2804)  
YANG Shan-yuan (2799/0810/0337)  
SHEN Yun-kang (3088/0336/6921)  
YIN Hung-chang (3009/1347/4545)

"Studies on Photophosphorylation: X. Mechanism of 'Oxidative Photophosphorylation'"

Peiping, Scientia Sinica, Vol 12, No 9, Sep 63, pp 1406-1408

Text in English.

This paper was received for publication on 12 June 1963.

Authors' Affiliation: All of Institute of Plant Physiology, Chinese Academy of Sciences, Shanghai.

WANG Shan-yuan (3769/0810/3293)

"Serological Diagnosis of Nuclear Polyhedrosis in Silkworm"

Peiping, Scientia Sinica, Vol 12, No 9, Sep 63, pp 1408-1408

Text in English.

The author acknowledges that the research was conducted at the Institute of Experimental Biology, Chinese Academy of Sciences, Shanghai, and expresses thanks to professors CHU Hsi (2612/3156) and K'UANG Ta-jen (0562/6671/0086) and Miss Wang Yu-lan (3769/1636/5695) for discussing the results and for assisting in the experiments.

This paper was received for publication on 27 April 1963.

Author's Affiliation: Institute of Epidemiology and Microbiology, Chinese Academy of Medical Sciences, Peiping.

C-O-N-F-I-D-E-N-T-I-A-L

LIU Yuan-yuan (2692/0337/0337)  
LIU Hua-ch'eng (2692/5478/2525)

"Studies on Infectious RNA of Japanese B Encephalitis Virus II. Change of RNase Activity in Mouse Brains During Virus and RNA Infections"

Peiping, Scientia Sinica, Vol 12, No 10, Oct 63, pp 1553-1561

Text in English.

The authors express thanks to Miss WANG Lan for her cooperation in a part of the technical work of this experiment.

This paper was received for publication on 17 May 1963.

Authors' Affiliation: Both of Laboratory of Biochemistry, Department of Virology, Chinese Academy of Medical Sciences.

CHANG Sheng-ken (4545/3932/5327)  
FENG Te-p'ei (7458/1795/1014)

"Changes of Free Amino Acids Content in Stimulated Nerve"

Peiping, Scientia Sinica, Vol 12, No 10, Oct 63, pp 1591-1593

Text in English.

This paper was received for publication on 16 July 1963.

Authors' Affiliation: Both of Institute of Physiology, Chinese Academy of Sciences, Shanghai.

C-O-N-F-I-D-E-N-T-I-A-L

CHENG Chu-ying (6774/4555/5391)  
WANG Yun-chiu (3076/7189/0046)  
SHIH Shu-chen (4258/3219/3791)

"Notes on Dynamic Processes of Thermoregulation in White Mice"

Peiping, Scientia Sinica, Vol 12, No 10, Oct 63, pp 1593-1595

Text in English.

The authors express thanks to Prof. S. P'AI for his encouragement and suggestive criticisms.

This paper was received for publication on 8 July 1963.

Authors' Affiliation: All of Institute of Biophysics, Chinese Academy of Sciences, Peiping.

YANG Fu-yu (2799/4395/1938)  
LIN Chih-huan (2651/3112/3562)  
LI Sheng-kuang (2621/3932/1684)

"Restitution of Liver Mitochondria in Whole-Body Irradiated Mice"

Peiping, Scientia Sinica, Vol 12, No 10, Oct 63, pp 1595-1597

Text in English.

The authors express thanks to Prof S. P'AI for his helpful criticism and to CHANG Shu-hsiu for her technical assistance.

This paper was received for publication on 8 July 1963.

Authors' Affiliation: All of Institute of Biophysics, Chinese Academy of Sciences, Peiping.

Earth Sciences

CH'EN Yao-wu (7115/5069/2976)

"Research on Higher Atmospheric Models"

Peiping, Ti-chiu Wu-li Hsueh-pao (Acta Geophysica Sinica),  
Vol 12, No 1, Jun 63, pp 1-10

Translation of Russian Abstract: Modern atmospheric models are examined on the basis of the latest information on thermodynamic parameters. Computations of the molecular temperature of the thermosphere are made directly from experimental data on density, obtained with the aid of rockets and earth satellites, by numerical integration of the basic hydrostatic equation downward. The evaluation demonstrates that it is impossible to effect such an integration upward. Conversely, the method of integration downward can significantly reduce the computation error  $T_m(Z)$ . Also computed is the distribution of kinetic temperature, according to the altitude in the thermosphere by the approximation method of experimental data on the density upward, assuming that the diffusion separation occurs at 120 kilometers. Results of the calculation substantiate the fact that the isotherm does not appear in the thermosphere, and the temperature in it must be regulated with the increase in altitude.

(continued)

**References:** The author cites 13 references, none dated later than 1960. Of particular note is one reference to a paper presented by R. A. Minzner, entitled "Higher Atmospheric Densities and Temperatures Demanded by Satellite and Recent Rocket Rocket Measurements," American Rocket Society, 1959.

Author's Affiliation: Institute of Geophysics [and Meteorology], Chinese Academy of Sciences.

C-O-N-F-I-D-E-N-T-I-A-L

HSU Chung-hsin (1776/0022/0207\_

"Theoretical Calculations of Seismic Waves During Explosions"

Peiping, Ti-ch'iu Wu-li Hsueh-pao (Acta Geophysica Sinica), Vol 12,  
No 1, Jun 63, pp 41-50

Translation of Russian Abstract: In this paper, the author assumes that there is a seismic area  $m = 0$  or faulting around the cavity of an explosion. Approximation of calculations were made separately for both soft and friable rock. Results of the computations demonstrate that the coefficient of amplitude attenuation of seismic waves in friable rock is smaller than in soft rock.

This paper was written with the great assistance and general direction of Prof HO Tse-ch'ing (0149/3419/1987). The author also expresses his appreciation to Prof FU Ch'eng-i (0265/211p/5030) for reviewing and making corrections on this paper.

References: The references used include 2 Russian and 7 English (including one by two Japanese coauthors, dated 1935, and one English translated into the Chinese.) One Russian paper,

(continued)  
published in 1962, is entitled "On the Problem of Elastic Waves During Gas Explosions."

Author's Affiliation: Changchun Institute of Geology.



TENG Chi-wen (3326/0679/2429)

"Dynamic Features of Seismic Waves Propagated in Model Media  
With a Rectangular Fault"

Peiping, Ti-ch'iu Wu-li Hsueh-pao (Acta Geophysica Sinica),  
Vol 12, No 1, Jun 63, pp 75-90

Translation of Russian Abstract: Results of a study on liquid-solid, three-dimensional models of the features of seismic waves in the media with a rectangular fault are presented in this paper. The dynamic (graphs, frequency spectra, and amplitudes) and kinematic features of reflected  $P'_{\text{refl}}(n)$  and diffracted  $P_{\text{diff}}(v)$ ,  $P_{\text{diff}}(v)$ ,  $P_{\text{diff}}(n)$  waves which were recorded on a system of linear profiles.

Criteria for explaining and tracing faults were formulated, based on the study of dynamic features of the waves. The main criteria are as follows:

1. The presence of wave changes in the region of reflected and diffracted waves from the top and bottom limb of the fault. The shape of waves  $P'_{\text{refl}}$ ,  $P'_{\text{refl}}(v)$ , and  $P_{\text{diff}}(n)$  is different.

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For various types of reflected and diffracted waves, the shape of the spectrum and the frequency of the spectrum maximum differ. During transition from a reflected wave to a diffracted wave and vice-versa, there is a sharp change of wave spectra. The diffracted wave possesses a lower low-frequency spectrum.

3. The presence of a maximum on the amplitude-distance curves explained by the interference of reflected and diffracted waves (the maximum is noted in the region of contact of the reflected and diffracted wave fronts). A regular change of the position of the maximum occurs by transfer of the oscillation source.

4. There is a decrease of predominant wave cycles in the zone of fault. Furthermore, the best directions of a seismic profile for the azimuth  $0 \sim 60^\circ-90^\circ$  are explained in the article.

The author expresses his appreciation to Prof A.M. Yepinat'yeva of the Institute of Geophysics, Academy of Sciences, USSR, for his assistance and guidance and to T.V. Aleksandrovna for his help in carrying out calculation work and preparing the tables and graphs for this paper.

C-O-N-F-I-D-E-N-T-I-A-L

(continued)

References: A total of 25 is listed by the author of this paper. Among these references, 17 were in Russian and 8 in English (including one coauthored by two Japanese) all dated 1936-1962.

Author's Affiliation: Institute of Geophysics [and Meteorology], Chinese Academy of Sciences.

LIU Ju-teng (0491/3067/7506)

"Conditions of the Formation of Reflection Points of Refracted Waves and Their Peculiarities"

Peiping, Ti-ch'iu Wu-li Hsueh-pao (Acta Geophysica Sinica), Vol 12, No 1, Jun 63, pp 93-98

Translation of Russian Abstract: Formation and peculiarities of reflection points of refracted waves at conditions where  $V_0$  and  $V_r$  are constants and the boundary is concave are examined is given by the data of industrial observations which were obtained on nonlinear profiles.

References: All four references listed are in Russian, dated 1952-1960.

C-O-N-F-I-D-E-N-T-I-A-L

CHANG Kung-liang (4545/0361/0081)

"On the Asymmetrical Effect of Flare Position Upon Geomagnetic Activity"

Peiping, Ti-ch'iu Wu-li Hsueh-pao (Acta Geophysica Sinica), Vol 12 No 1, Jun 63, pp 32-39

Text of English Abstract: Flares of importance  $\geq II^+$  are grouped according to their heliographic position and magnetic class of the active regions. By means of superposed-epoch method, we have calculated the mean daily frequency of  $K_p \geq 6$  under different conditions. It is found that, for the magnetic group  $\beta\gamma + \gamma + \beta_1$  solar flares in the northern hemisphere produce 2 stronger corpuscular effect than those in the southern hemisphere, but for the flares in  $\beta_1 + \beta$  regions, no such hemispheric asymmetry is found. Also, in the southern hemisphere the western flares have stronger effect than the central and eastern ones, but in the northern hemisphere only those flares in  $\beta_1 + \beta$  regions have this E - W asymmetry. These asymmetrical relations appear in all of the last three solar cycles, and it is especially conspicuous during equinoxes.

The author stated that after this paper was completed, he read an article by Glazer B. Bell (in the Smithson. Contrib. Astrophys.,

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Vol 5, No 7, 1961) in which many parts agreed closely with his own work. However, the most significant difference is that Bell did not ascertain any East-West asymmetrical effect of solar flare position, while the Chinese have noticed the existence of East-West effect of solar flare position upon geomagnetic activity.

The author acknowledges LIU Ch'i-chun (0491/0366/3537) and KUO Ch'i-hua (6753/0796/ 5478) for their computation work on this subject.

References: The titles of 11 references were listed at the end of this paper. Four were written by foreigners, one Japanese and 2 Chinese. One item was written by CHU Kang -k'un (2612/1511/1507) and published in the Ti-ch'iu Wu-li Hsueh-pao, Vol 11, No 2, 1962, page 183.

Author's Affiliation: Institute of Geophysics [and Meteorology], Chinese Academy of Sciences.

CHANG Kuan-jen (4545/0385/0086)

"Extension of the Ray Method in an Elastico-Viscous Medium"

Peiping, Ti-ch'iu Wu-li Hsueh-pao (Acta Geophysica Sinica),  
Vol 12, No 1, Jun 63, pp 51-56

Text of English Abstract: By modifying the equation of motion of an elastico-viscous medium of Voigt's type and using the general procedures of the Ray method, the equation of eikonals and recurrent formulas of the intensity of the wave fronts are deduced. For the zero-order approximation, the formula of the intensity of the wave front is the same as that in a perfect elastic medium, except multiplied by an exponential absorption factor. The wave velocities and absorption coefficient are found to depend upon the frequency, their relations being approximately in accord with that given by N. Ricker so that for low frequencies the medium behaves like a perfect elastic solid. The formulas obtained here may be used for calculating the intensities of wave fronts in a layered elastico-viscous medium.

At the introduction of this paper, the author mentioned that Prof FU Ch'eng-i (0265/2110/5030) has also conducted research

(continued)  
on the same problem of whether the Ray Method can be extended in an elastico-viscous medium.

References: In this paper, 11 titles of references were listed, of which 6 were in Russian (included one reprinted in the Chinese), one in French, and 4 in English (including one by C.Y.Fu [Prof FU Ch'eng-i], entitled "On Seismic Rays and Waves," Bulletin of the Seismological Society of America, Volume 37, No 4, pages 331-346, 1947). No reference mentioned in this paper was dated later than 1961.

Author's Affiliation: Changchun Institute of Geology.

MA En-tse (7456/1869/3419)

"A Study of Multiple Seismometer Theory in the Presence of Microseisms"

Peiping, Ti-ch'iu Wu-li Hsueh-pao (Acta Geophysica Sinica),  
Vol 12, No 1, Jun 63, pp 58-73

Text of English Abstract: Where difficulty has been encountered in obtaining good reflections, it has become almost a general practice, it has become almost a general practice to use a group of seismometers instead of a single seismometer in a channel. One of the primary advantages in such a method is to increase the ratio of useful to extraneous energy recorded in seismogra.

If the seismometers are too near to each other, benefit is seldom obtained because all seismometers in a channel might be considered to be placed at a single point, and multiple detection is only a method of increasing the amplitude both of useful and of extraneous energy.

As the separation of seismometers becomes large enough,

(continued)

microseism can be assumed as a random noise; the signal to noise ratio will be increased  $\sqrt{n}$  times by using multiple detection, when the effective waves strike the seismometers fairly well in phase. But where reflected waves from strong dipping or shallow beds are involved, the discriminatory powers of seismometers might defeat its purpose unless the seismometers in each group are closely spaced.

Assuming microseisms to be plane waves traveling to the earth surface from random directions, the problem of how far the detection can be improved when the seismometers in a single group are closely spaced is studied in detail. It is shown that the relative amplitude of microseisms in the records depends statistically not only on the number of seismometers in a single group, but also on distances between them, the microseismic frequency spectra, and the elastic velocity in the medium.

The result obtained in this paper can be used as a guide for choosing multiple seismometer configuration in seismic field operation.

The author expresses thanks to Prof FU Ch'eng-i (0265/2110/5030)

C-O-N-F-I-D-E-N-T-I-A-L

(continued)

for his encouragement and interest in this paper.

References: Seven references were listed, of which two were by the same author, MA En-tse, and dated 1957 and 1962, respectively. Among the others, three were by Russians, one British and one American.

Author's Affiliation: Peiping College of Petroleum Geology.

C-O-N-F-I-D-E-N-T-I-A-L

CHOU Wei (0719/3555)

## "Direct Exploratory Studies of the Ionosphere"

Peiping, Ti-ch'iu Wu-li Hsueh-pao (Acta Geophysica Sinica),  
Vol 12, No 1, Jun 63, pp 100-115

Text of English Abstract: In this article, various methods are described for studying the ionosphere and radio wave propagation by means of geophysical rockets and earth satellites. The relations between the methods and the subjects, which can be studied by the methods, are shown. The essential results, which are obtained until now, are illustrated. In conclusion, the main tendency of further studies is briefly mentioned.

In this article, no mention of actual work or experiment in the ionosphere was being conducted by the Chinese; however, of particular note is one reference in this paper which lists a K.C. YEH (nca) and G.W. Swenson as coauthors of an English article, "The Scintillation of Radio Signals From Satellites," J. Geophys. Res. 64, pp 2281-2286, Dec 59.

References: Of the 45 references listed and dated 1953-1962,

(continued)

12 were Russian and 30 were English (including two Japanese writers and one Chinese as mentioned above). References taken from original Russian sources are listed as follows:

1. Al'pert, Ya. L., "Study of the Ionosphere and Interplanetary Gases With the Aid of Earth Satellites and Space Rockets." Uspekhi Fizicheskikh Nauk (Progress of Physical Sciences), Vol 71, 1960, p 369.

4. Gringauz, K.I., Rudakov, V.A. and Kaporskiy, A.V., "Apparatus for Rocket Measurement of Free Electron Concentrations in the Ionosphere," AN-SSSR, Iskustvennyyee Sputniki Zemli (Academy of Sciences USSR, Artificial Earth Satellites), NO 6, 33, 1961.

5. Gringauz, K.I. and Rudakov, V.A., "Measuring Electron Concentrations in the Ionosphere Up to Altitudes of 420-470 Km, Conducted During the IGY With the Aid of Radio Waves, Radiated From Geophysical Rockets," *ibid*, No 6, 48, 1961.

10. Mityakov, E. Ye., Mityakov, N.A., and Rapoport, V.O., "On the Problem of Measuring Electron Concentrations in the Ionosphere and Interplanetary Space, Izvestiya VUZ (News of

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the Higher Educational Institutions), No 6, 1960, p 949.

14. Al'pert, Ya.L., *Ionosfere i Rasprostraneniye Radio Voln* (The Ionosphere and the Propagation of Radio Waves), 1960, Moscow.

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Author's Affiliation: Institute of Geophysics [and Meteorology], Chinese Academy of Sciences.

CHANG Chao-hsien (1728/5126/0341)

"The Sunrise Effects in the Ionospheric E and F Layers"

Peiping, Ti-ch'iu Wu-li Hsueh-pao (Acta Geophysica Sinica), Vol 12, No 1, Jun 63, pp 12-30

Abstract: English abstract accompanies this article.

References: Three German, 4 Russian, and 28 English references were listed by the author, dated from 1952 to 1960.

Author's Affiliation: Institute of Geophysics [and Meteorology], Chinese Academy of Sciences.



C-O-N-F-I-D-E-N-T-I-A-L

KUO Tseng-chien (6753/1073/1696)  
CHANG Cheng (1728/6134).

"Preliminary Report of Seismic Activity East of Min-ch'in  
(Kansu)"

Peiping, Ti-ch'iu Wu-li Hsueh-pao (Acta Geophysica Sinica),  
Vol 12, No 1, Jun 63, pp 118-120

Abstract: Not given.

Authors' Affiliation: Both of Lanchow Institute of Geophysics  
and Meteorology, Chinese Academy of Sciences.

WANG Jih-lun (3769/2480/0243)

"Study on the Sinian -Cambrian Boundary in North China"

Peiping, Ti-chih Hsueh-pao (Acta Geologica Sinica), Vol 43,  
No 2 May 63, pp 116-140

Excerpts of Russian Abstract: This paper disputes the conventional position that the base of the Lower Cambrian in China is the Stratum characterized by the fauna *Redlichia chinensis*, *Redlichia walcotti*, *Paleolenus*, and *Ptychoparia*. The author supports his analysis by comparing sedimentation and geotectonic data, since there occur strata without organic remains and underlying strata characterized by fauna. The Lower Cambrian in South China extends to the north and crosses Ch'in-ling, thus uniting with the Lower Cambrian in North China. However, other formations or "series" occur, the Sinian or Upper Sinian in South China, as well as the Liu-ch'iu-an suite (Honan), the T'ou-ch'uan suite (in T'ai-han-shan), and the Fu-chin-shan \*in Yen-shan) in North China, all of which have analogous characteristics. The author concludes that the Sinian in South China is stratigraphically higher than that in North China, the former relating to the Paleozoic and the latter to the Proterozoic.

(continued)

The author expresses thanks to paleontologist SUN Yun-chu (1327/0061/6999) for his assistance and also to the Soviet experts Borovikov and Vologdin for their cooperation in this study, especially on Pre-Cambrian stratigraphy, geotectonics, and paleozoic fauna.

References: A total of 68 listed, including 40 Chinese, 12 Russian, 3 Mexican, one French, one Norwegian, and 11 English, dated from 1923 to 1960

YEN Lien-ch'uan (7051/1670/3123)

"Main Geotectonic Features in Eastern Ch'in-ling and Contiguous Regions"

Peiping, Ti-chih Hsueh-pao (Acta Geologica Sinica), vol 43, No 2, May 63, pp 156 - 168

Excerpts of Russian Abstract: The region of eastern Ch'in-ling is located at the juncture of China's eastern and western sections which belong to geotectonically different systems, and it represents the boundary between China's northern and southern sections which are characterized by different stratigraphic systems. The eastern Ch'in-ling region may be divided into three different zones (tectonic elements of the first order): a northern zone -- the Sino-Korean platform; an intermediate zone -- Ch'in-ling parageosynclinal system; and a southern zone -- Yen-tse paralatform. The author traces the main forms of geotectonic development in this region, from quantitative to qualitative changes.

The author expresses thanks to the many survey teams in the Ch'in-ling area for contributing their survey data for this report;

(continued)

to HO Yung-hsiang (0149/3057/4382) for his map work; and to LI Shih-tseng (2621/1597/2582) for assisting in preparing this paper.

References: All 26 references are in Chinese, dated from 1939 to 1960.

This paper was received for publication on 14 March 1962.

JEN Ying-ch'en (0117/5391/1820)

"Sulfate Salts and Their Paragenetic Association in Lead-Zinc Deposits in China"

Peiping, Ti-chih Hsueh-pao (Acta Geologica Sinica), Vol 43, No 2, May 63, pp 1710181

Excerpts of Russian Abstract: This paper presents a diagnosis of sulfate salts, based on determining the reflection capability of minerals in various lights through X-ray analysis of their powders and other chemical and physical properties. Sulfate salts and arsenic-antimony-bismuth-containing minerals which occur in lead-zinc deposits in China are represented by boulangerite, jamesonite, bournonite, colorless ores, enargite, luzonite, thenardite, proustite, franckeite, bismuth-plagionite, klaprotholite, tetradymite, "kheldite," and alaskaite. All these minerals occur in various associations in deposits of different genetic types, listed by the author in the abstract.

The author extends thanks to T;U Kuang-ch'ih (3205/0342/3589) and LI Hsi-lin (2621/6932/2651) for their guidance and the use of the latter's material.

(continued)

References: The bibliography lists 10 titles: 3 Chinese, 2 Russian, one German, and 4 English, dated from 1948 to 1962.

This paper was received for publication on 15 February 1963.

LIU Sen-yuan (0491/2773/0337)

"On Heat Balance on Hainan Island"

Peiping, Ti-li Hsueh-pao (Acta Geographica Sinica), vol 29,  
No 3, Sep 63, pp 188-195

Translation of Russian Abstract: This paper presents charts showing the annual distribution of heat balance components, based on calculations made on Hainan Island, and interprets the characteristics of the space distribution of these components. In addition, it investigates the relationship between heat balance and the natural landscape.

The author expresses thanks to HUANG Jun-pen (7806/3387/2609) for guidance, to HO Ta-chang (0149/1129/4545) for reviewing the rough draft, and to WANG Chun-hua (3769/0971/5478) for drawing the sketches and charts in this article.

References: Eight of the references are in Russian, and four are in Chinese (including one translated from Russian), dated 1952-1961.

(continued)

This paper was received for publication on 28 November 1962.

Author's Affiliation: South Central Institute of Geography,  
Chinese Academy of Sciences.

C-O-N-F-I-D-E-N-T-I-A-L

CH'AI Hsiu (2693/1485)  
CHIN Shu-jen (6855/2885/0088)

"Types, Origin, and Evolution of Marshes in the Jo-erh-hai  
(Norgai) Plateau"

Peiping, Ti-li Hsueh-pao (Acta Geographica Sinica), Vol 29,  
No 3, Sep 63, pp 219-235

Excerpts of Russian Abstract: The region under study is located between 32°20' - 34°10' north latitude and 102°50' east longitude in the basins of the tributaries of the Huang-ho, the Hei-ho, and the Pei-ho. This region constitutes a plateau 3,400 meters above sea level, with broad valleys and low hills. The marshes in the valleys are concentrated in the middle current and lower part of the Huang-ho, but have a small area in the Pei-ho basin. Total area of the marshes is 2696.2 square kilometers; the marsh coefficient is 21.4 percent. All the marshes in this area are of the lowland-grassy type, which the authors classify into four subtypes, on which basis they describe the origin and development of these marshes.

The authors extend appreciation to Prof TING Hsi-chih (0002/

(continued)  
6932/4363) for reviewing this paper in detail and to LANG Hui-ch'ing (6745/3409/0615), LI Chen (2621/4394), CHING Kuei-ho (2529/6311/ 0735), and YANG Ping-keng (2799/4426/1649) for rendering valuable ideas for this paper.

This paper was received for publication on 3 May 1963.

Authors' Affiliation: Both of Department of Geography, Kirin Normal College.

C-O-N-F-I-D-E-N-T-I-A-L

FU Pao-P'u (0265/2128/3877)

"A Feature of Microclimate in Undulating Country"

Peiping, Ti-li Hsueh-pao (Acta Geographica Sinica), Vol 29,  
No 3 Sep 63, pp 175-186

Abstract: English abstract accompanies this article.

References: All three references are by the same author of  
this paper, dated 1958-1962.

This paper was received for publication on 29 January 1963.

Author's Affiliation: Department of Meteorology, Nanking  
University.

T'ANG Mou-ts'ang (3282/2021/5547)

"Diurnal Variation of Weather in Ch'i-lien-shan Region"

Peiping, Ti-li Hsueh-pao (Acta Geographica Sinica), Vol 29,  
No 3, Sep 63, pp 188-195

Abstract: English abstract accompanies this article.

The author expresses thanks to YUAN Fu-mou (5913/4395/5399)  
and HSU Man-ch'un (6079/2581/2504) for their assistance and also  
to KAO Yu-hai (7559/2589/4406) for his guidance in this work.

This paper was received for publication on 6 March 1963.

Author's Affiliation: Lanchow Institute of Geophysics, Chinese  
Academy of Sciences.

C-O-N-F-I-D-E-N-T-I-A-L

HSIA K'ai-ju (115/7030/0320)  
LI Chao-shu (2621/2507/3219)

"Research on Alluvial Morphology of the Lower Wei-ho (Yellow River)"

Peiping, Ti-li Hsueh-pao (Acta Geographica Sinica), Vol 29,  
No 3, Sep 63, pp 207-217

Abstract: English abstract accompanies this article.

References: Sixteen references are listed including 7 Chinese and 3 American, dated 1934-1962.

This paper was received for publication on 18 May 1963.

Authors' affiliation: Both of Department of Geography, Northwest University.

FENG Sheng02u (7458/4939/2976)

"The Evolution of the Drainage System of the Minchin Oasis (Kansu Province)"

Peiping, Ti-li Hsueh-pao (Acta Geographica Sinica), Vol 29,  
No 3, Sep 63, pp 241-249

Abstract: English abstract accompanies this article.

The author expresses thanks to CHAO Sung-chao (6392/2646/0829) for reviewing and correcting the rough draft of this paper.

References: All ten references listed are in Chinese. Some of them are undated. One is dated 1925.

This paper was received for publication on 30 March 1963.

Author's Affiliation: Department of Geology and Geography, Lanchow University.



C-O-N-F-I-D-E-N-T-I-A-L-

CHIN Yu-kan (6855/3768/3771)

"Urushtenia From the Lower Permian of China"

Peiping, Ku-sheng-wu Hsueh-pao (Acta Palaeontologica Sinica),  
Vol 11, No 1, Feb 63, pp 1-35

Abstract: English abstract accompanies this article.

Author's Affiliation: Institute of Geology and Paleontology,  
Chinese Academy of Sciences.

CHANG Lin-hsin (1728/6689/0207)

"Fusilinids of the Late Carboniferous Period in K'o-p'ing and  
Other Nearby Regions in Sinkiang"

Peiping, Ku-sheng-wu Hsueh-pao (Acta Palaeontologica Sinica),  
Vol 11, No 1, Feb 63, pp 36-70

Russian summary accompanies this article.

Author's Affiliation: Institute of Geology and Paleontology,  
Chinese Academy of Sciences.

KO Mei-yu (5514/2734/6877)

"Graptolites From the Miaopo Shale (Middle Ordovician), W. Hupeh I."

Peiping, Ku-sheng-wu Hsueh-pao (Acta Palaeontologica Sinica),  
Vol 11, No 1, Feb 63, pp 71-91

Abstract: English abstract accompanies this article/

Author's Affiliation: Institute of Geology and Paleontology,  
Chinese Academy of Sciences.

SHIH Ts'ung-kuang (2457/1783/1684)  
HO Chun-te (0149/0193/1795)

"Discovery of Ostracod Fossils in the Rocks of the City Walls  
of Chien-ko, Szechwan"

Peiping, Ku-sheng-wu Hsueh-pao (Acta Palaeontologica Sinica),  
Vol 11 No 1, Feb 63, pp 92-98

Russian summary accompanies this article.

Authors' Affiliation: Both of Institute of Geology and Paleon-  
tology, Chinese Academy of Sciences.

C-O-N-F-I-D-E-N-T-I-A-L-

HSU I-wen (6079/0308/2429)

"Several Classes of 'Hexacrinites' of the Devonian Period in Hsiang-chou Hsien, Kwangsi"

Peiping, Ku-sheng-wu Hsueh-pao (Acta Palaeontologica Sinica), vol 11, No 1, Feb 63, pp 108-113

Russian summary accompanies this article.

The author thanks Prof MU En-chih (4476/1869/0037) for his guidance and careful reading the draft of this paper.

Author's Affiliation: Institute of Geology and Paleontology, Chinese Academy of Sciences.

LIN Pao-yu (2651/1405/3768)

"New Types of Agetolites of the Late Ordovician Period in Shan-yang Hsien, Shansi Province"

Peiping, Ku-sheng-wu Hsueh-pao (Acta Palaeontologica Sinica), vol 11, No 1, Feb 63, pp 119-121

Russian summary accompanies this article.

Author's Affiliation: Academy of Geological sciences, Ministry of Geology.

C-O-N-F-I-D-E-N-T-I-A-L

P'AN Chiang (3382/3068)

"On the Occurrence of *Sinamia Zdanskyi Stensiö* From South China Platform"

Peiping, Ku-sheng-wu Hsueh-pao (*Acta Palaeontologica sinica*),  
Vol 11, No 1, Feb 63, pp 124-129

Abstract: English abstract accompanies this article.

Author's Affiliation: Geological Museum, Ministry of Geology.

YU Chien-chang (0205/1696/4545)

"Discussion of the Relationship of Genus *Cystophrentis* With  
*Hexacorallia* and the Establishment of the Order *Mesocorallia*  
Yu and Family *Cystophrentidae* Yu"

Peiping, Ku-sheng-wu Hsueh-pao (*Acta Palaeontologica Sinica*),  
Vol 11, No 3, Aug 63, pp 307-312

Russian summary accompanies this article.

Author's Affiliation: Ch'ang-ch'un Geological College.

C-O-N-F-I-D-E-N-T-I-A-L

TU Yen-hao (4151/5888/6275)

"The Ontogeny of Hanchungolithus Multiseriatus (Endo) and Ningkianolithus Welleri (Endo), With a Brief Note on the Classification of the Trinucleidae"

Peping, Ku-sheng-wu Hsueh-pao (Acta Palaeontologica Sinica), Vol 11, No 3, Aug 63, pp 319-337

English summary accompanies this article.

Author's Affiliation: Institute of Geology and Paleontology, Chinese Academy of Sciences.

MU En-chih (4476/1869/0037)

"On the <sup>C</sup>omplication of Graptolite Rhabdosome"

Peiping, Ku-sheng-wu Hsueh-pao (Acta Palaeontologica sinica), Vol 11, No 3, Aug 63, pp 346-374

English summary accompanies this article.

Author's Affiliation: Institute of Geology and Paleontology, Chinese Academy of Sciences.

C-O-N-F-I-D-E-N-T-I-A-L

CHAO Chia-ming (6392/0857/2494)  
CH'EN Hua-ch'eng (&115/5478/2052)

"New Fossil Corals From the Chihhsia-zu of Lower Permian, Southern Anhwei"

Peiping, Ku-sheng-wu Hsueh-pao (Acta Palaeontologica Sinica),  
vol 11, No 3, Aug 63, pp 378-391

English summary accompanies this article.

Authors' Affiliations: CHAO of Institute of Geology and Paleontology, Chinese Academy of Sciences; CH'E<sup>N</sup> of Hua-tung Geological Research Institute, Ministry of Geology.

HOU Hung-fei (0230/7703/7378)

"New Species of Brachiopoda of the Middle Devonian Period"

Peiping, Ku-sheng-wu Hsueh-pao (Acta Palaeontologica Sinica),  
vol 11, No 3, Aug 63, pp 412-420

Russian summary accompanies this article.

Author's Affiliation: Academy of Geological Sciences, Ministry of Geology.

C-O-N-F-I-D-E-N-T-I-A-L

CHANG Lu-chin (1728/3873/3866)

"Some Nomenclature and Distribution of the Gymnospermae Pollen  
in the Mesozoic Group"

Peiping, Ku-sheng-wu Hsueh-pao (Acta Palaeontologica Sinica),  
Vol 11, No 3, Aug 63, pp 433-437

Russian summary accompanies this article.

Author's Affiliation: Institute of Geology and Paleontology,  
Chinese Academy of Sciences.

C-O-N-F-I-D-E-N-T-I-A-L-

HANG Heng-jung (2635/1854/2837)  
MO Ching-erh (5459/7234/0348)

"Spectrophometric Analysis of AG-Pegesi"

Peiping, T'ien-wen Hsueh-pao (Acta Astronomica Sinica), Vol  
11, No 1, Jun 63, pp 27-33

Translation of Russian Abstract: Spectrograms of AG Pegesi were obtained in 1962 by using a slit spectrograph mounted on the 60-cm reflector of Purple Mountain Observatory. The dispersion of the spectrograms was 153 Å/mm at H<sub>r</sub>. The following parameters were determined: spectrometric temperatures, the equivalent widths and relative intensities of emission lines, and electron temperatures. A comparison of these parameters with the results obtained by other authors in the 1951-1960 period leads to these conclusions: (1) spectrophotometric temperatures as a whole have dropped each year during the last decade; (2) intensities of emission lines with high ionization potentials increase in comparison with the intensities of emission lines with low ionization potentials; (3) the intensities of forbidden lines also increased; and (4) a specific relationship exists between changes in equivalent widths of emission lines of hydrogen and spectrophotometric temperatures. It

(continued)

is shown that the spectrophotometric temperature drops with an increase in the equivalent widths of hydrogen emission lines and vice versa.

Authors' Affiliation: both of Purple Mountain Observatory,  
Chinese Academy of Sciences.



C-O-N-F-I-D-E-N-T-I-A-L

HSIEH Chia-jung (6200/1367/2837)

"Problems Pertaining to Geology and Ore Deposits of a Copper Deposit in Shansi Province"

Peiping, Scientia Sinica, vol 12, No 9, Sep 63, pp 1345-1355

Text in English

This paper was received for publication on 11 December 1962.

Author's Affiliation: Academy of Geological Sciences, Ministry of Geology.

YANG Chung-chien (2799/6945/0256)  
CHOU Ming-chen (0719/2494/6966)

"Cretaceous and Paleocene Vertebrate Horizons of North Kwangtung"

Peiping, Scientia Sinica, vol 12, No 9, Sep 63, p 1411

Text in English.

This paper was received for publication on 25 May 1963.

Authors' Affiliation: Both of Institute of Vertebrate Paleontology and Paleoanthropology, Chinese Academy of Sciences.

C-O-N-F-I-D-E-N-T-I-A-L

CHOU Ming-chen (0719/2494/6966)  
LI Ch'uan-k'uei (2621/0273/1145)

"A Fossil of Homogalaz from the Eocene of Shantung"

Peiping, Scientia Sinica, Vol 12, No 9, Sep 63, pp 1411-1412

Text in English.

This paper was received for publication on 25 May 1963.

Authors' Affiliation: Both of Institute of Vertebrate Paleontology and Paleoanthropology, Chinese Academy of Sciences.

MENG Hsien-min (1322/2009/3046)

"The Classification of Ore Deposits and the Search of Ore"

Peiping, Scientia Sinica, Vol 12, No 10, Oct 63, pp 1564-1584

Text in English.

This paper was received for publication on 6 June 1963.

Author's Affiliation: Academy of Geological Sciences, Ministry of Geology.

Technical Sciences

HUANG Lin (7806/3829)

"Problems in the Dynamics of Control Systems and in the Theory of Stability of Motion"

Peiping, Li-hsueh Hsueh-pao (Acta Mechanica Sinica), Vol 6, No 2, Jun 63, pp 89-110

**Abstract:** This paper presents some of the major problems in the dynamics of current control systems and basic problems related to the stability of motion. The state of world research on these problems is reviewed, as are the methods used by various investigators to solve these problems and achievements. Problems found in the various theories such as the theory of the stability of motion, the theory of optimalization, etc. are also discussed.

The paper concludes with a list of six areas which, according to the author, should be further investigated. They are summarized below:

1. The construction of Lyapunov functions for linear control systems with constant coefficients and those with variable coefficients. Application of the Second Method of Lyapunov

(continued)  
in systems analysis and design and in the solution of asymptotic stability problems of nonlinear systems.

2. Investigation of the stability theory for systems with distributed parameters and systems with time lag aftereffects via Lyapunov's Second Method. The combination of Lyapunov's theory and methods of analytic mechanics in the study of stability problems of mechanical systems such as gyro-systems and systems with rigid body cavity containing fluid.

3. Use of methods of nonlinear mechanics in the treatment of periodic processes of nonlinear control systems. The scope of application and estimated error of various approximation methods, and their use in the synthesis of systems to produce or inhibit free oscillation. Initiation of studies on the use of free or forced oscillation to improve the characteristics of systems, as well as studies on the dynamic processes of oscillating-type regulators.

4. Initiation of research on optimalization process in nonlinearly controlled systems and also on the theory of optimizing control. Study of problems in the synthesis of optimizing control devices, including analytic design and approximate synthesis.

(continued)

5. Consideration of the influence of various random factors when studying problems encountered in engineering practice.

6. Study of mathematical tools used in the solution of the aforementioned problems, considering the precision of each method. Experimental research on the aforementioned problems using modern computers.

References: Fifty-three references are cited. Most of them are of Soviet, US, and Chinese origins and were published between 1947 and 1962. The Chinese references cited are as follows:

CH'IEH Hsueh-sen (6929/1331/2773): Kung-ch'eng K'ung-chi-lun (Engineering Control Theory), Science Press, Peiping, 1958.

CH'IN Yuan-hsun (4440/0337/8113): Yung-tung Wen-ting-hsing I-pan-wen-t'i Chiang-i (Lectures on General Problems in the Stability of Motion), Science Press, Peiping, 1958.

CHANG Hsueh-ming (1728/1331/6900): "On Differential Equations for Control Processes," Shu-hsueh Chin-chan (Progress in Mathematics), No 4, 1962.

(continued)

KAO Wei-hsin (7559/4850/2450): "Construction of Lyapunov Functions," Pei-ching Ta-hsueh Hsueh-pao--Tzu-jan K'o-hsueh (Journal of Peking University--Natural Sciences), No 3, 1962.

SUNG Chien (1345/0256) and HAN Ching-ch'ing (7281/0079/3237): "Analysis and Theory of the Synthesis of Linear Control Systems for Speediest Response," Shu-hsueh Chin-chan (Progress in Mathematics), No 4, 1962.

HUANG Lin (7806/3829): "On the Estimation of Attenuation Time of Nonlinear Systems," Pei-ching Ta-hsueh Hsueh-pao--Tzu-jan K'o-hsueh (Journal of Peking University--Natural Sciences), No 1, 1960.

CHANG Wei-jen (1728/3634/0000): (Title of work not given), Avtomatika i Telemekhanika (Automatics and Telemechanics), Vol 10, 1961.

CHANG Ssu-ying (1728/0843/3467): (Title of work not given), Prikladnaya Matematika i Mekhanika (Applied Mathematics and Mechanics), Vol 2, 1959.

(continued)

Thanks are extended to CH'In Yuan-hsun, CHANG Hsueh-ming, CHANG Ssu-ying, KAO Wei-ping (7559/4850/3521), WU Yao-hua (0702/3852/5478), LI Hsun-ching (2621/6064/4342), and CHOU Ch'i-chao (0719/6386/6856) for suggestions during the writing of this paper and to CHANG Yuan-p'eng (1728/6678/7720) for help with the illustrations.

This paper combines under one heading two papers which were presented at the August 1962 General Mechanics Conference of the Mechanics Society of China: "Some Problems Related to the Dynamics of Control Systems," by HUANG Lin, and "The Theory of Stability of Motion and Some Developments in That Theory," by CHANG Ssu-ying.

Author's Affiliation: Peking University.

HSUEH Ming-lun (5641/2494/0243)

"Analysis of Laminar Magnetohydrodynamic Flow in the Entrance Region of A Flat Duct"

Peiping, Li-hsueh Hsueh-pao (Acta Mechanica Sinica), Vol 6, No 2, Jun 63, pp 168-170

Excerpts of Chinese Abstract: In analyzing the flow of an electrically conducting fluid through a duct with a transverse magnetic field, an estimation must be made of the length of the light of Langhaar's hypothesis. The results are compared with those reported by other investigators.

This paper was received for publication on 5 April 1962.

Author's Affiliation: Institute of Mechanics, Chinese Academy of Sciences.

C-O-N-F-I-D-E-N-T-I-A-L

CH' IEN Ling-hsi (6929/0109/1585)  
CHOU Ch'eng-t'i (0719/2110/0232)  
YUN Ta-chen (0061/1129/4176)

"Experiments on and Calculation of Load Limits of Circular Conical Shells"

Peiping, Li-hsueh Hsueh-pao (Acta Mechanica Sinica), Vol 6,  
No 2, Jun 63, pp 154-167

Translation of Russian Abstract" The carrying capacity of conical shells is investigated by combined theoretical and experimental analyses. Two types of loads are considered: (1) axial centering of the force P at the peak of the cone; (2) internal normal uniformly distributed loads. The lower edge of the shell is freely supported around the circumference and radially closed. According to experimental data on several models (plastic, carbon steel, and gypsum), kinematic and mechanical laws of change in the conical shells are proposed for the condition of creep under the action of the aforementioned loads. On this basis, a number of design formulas for calculating the carrying capacity of conical shells is derived by the energy method proposed in Reference 1, obtained for engineering practice.

(continued)

The article, "On the Load Limits of Conical Shells," by CH' IEN Ling-hsi, one of the authors of the present paper, is one of the two references cited.

This paper was read at the October 1962 conference on the theory of shells and plates which was sponsored by the Mechanics Society of China.

Authors' Affiliation: All of Dairen Engineering College.

LIN Ch'ao-ch'ang (2651/6389/1730)

"A Method for Solving Problems of Supersonic Conical Flows Over Thin Wings"

Peiping, Li-hsueh Hsueh-pao (Acta Mechanica Sinica), Vol 6, No 2, Jun 63, pp 111-132

Abstract: English abstract accompanies this article.

The paper was written under the guidance of WANG P'ei-sheng (3769/1014/3932). SUN Chia-yung (1327/1367/3057) offered invaluable suggestions concerning Addendum I. WANG Ming-chih (3076/7680/3112), HU Ch'ien-kang (5170/0051/0474), and LIN Chis-ts'ai (2651/3444/2088) helped check the mathematical formulas.

This paper was received for publication on 8 August 1962.

Author's Affiliation: Northwest Industrial University.

WANG Chao-ch'ien (0701/3564/0573)

"Vibration Modes and Natural Frequencies of Circular Conical (and Cylindrical) Shells"

Peiping, Li-hsueh Hsueh-pao (Acta Mechanica Sinica), Vol 6, No 2, Jun 63, pp 133-151

Abstract: English abstract accompanies this article.

Thanks are extended to TU Ch'ing-hua (2629/1987/5478) and LO Tsu-tao (5012/4317/6670) for suggestions regarding this paper and to YANG Shao-ch'i (2799/4801/7496) for checking the mathematics.

This paper was read at the October 1962 conference on the theory of plates and shells which was sponsored by the Mechanics Society of China.

Author's Affiliation: Sian Chiao-t'ung University.

CH'ENG Jui-ch'uan (4453/3843/0356)

"A Study on Ultrasonic Machining"

Peiping, Chi-hsieh Kung-ch'eng Hsueh-pao (Chinese Journal of Mechanical Engineering), Vol 11, No 2, Jun 63, pp 58-68

Translation of Russian Abstract: Ultrasonic machining is a new method used for brittle conducting and insulating materials. To improve this new technological method and increase the productivity of the machining, it is necessary to understand the mechanism for drilling the machined material. Results of the experiment demonstrate that the impact force sufficient for drilling the material is approximately 25 times greater than the feed power. A piezoelectrical power dynamometer was used which can very accurately indicate the impact force on the oscilloscope. A capacitive transducer was used to present the machining process. On the basis of the experiments, a number of graphs were plotted, showing the relationship of the parameters affected in this process, so that the mechanism of the process was checked. A method was also demonstrated for the correct application of this machining method and for increasing its productivity. In addition, this paper describes an experiment for

(continued)

improving the design of modern high-production ultrasonic tools.

Author's Affiliation: Research Institute(s) of Mechanical Engineering (Chi-hsieh K'o-hsueh Yen-chiu-yuan 2894/2750/4430/1331/4282/4496/7100).



CH' IEN Wen-han (6929/2429/3466)

"Investigation on the Method of Calculating Contact Strength for Novikov Gear Transmission"

Peiping, Chi-hsieh Kung-ch'eng Hsueh-pao (Chinese Journal of Mechanical Engineering), Vol 11, No 2, Jun 63, pp 69-75

Translation of Russian Abstract: The method for calculating contact strength for Novikov gear transmission is currently one of great interest to research workers on gearing. This paper presents a theoretical analysis of the formula for calculating the radius of the curve on sections perpendicular to the contact lines. The following conclusion is reached: the relationship between contact strength and the fundamental dimensions in Novikov gear transmission is analogous to that in evolute gearing.

Thanks are extended to CH'IU Ta-mov (0003/1129/6180) for checking the manuscript.

WENG Ping (5040/4426)

"Design and Calculation of Variable Cross Section Conical Springs"

Peiping, Chi-hsieh Kung-ch'eng Hsueh-pao (Chinese Journal of Mechanical Engineering), Vol 11, No 2, Jun 63, pp 77-83

Translation of Russian Abstract: Conical (telescopic) springs with variable cross sections have a number of advantages over cylindrical helical springs. Despite their small size, conical springs are highly shock-resistant. Thus, they are especially well-adapted to those machines which are limited by their size and designed to be shock-resistant. This paper endeavors to propose a new method in corresponding formulas for the design and calculation of such springs.

C-O-N-F-I-D-E-N-T-I-A-L

YANG Kuan-lien (2799/6034/1670)

"On Accuracy in Machining With a Grinder Made Automatic by Using a Rigid Plug Gage"

Peiping, Chi-hsieh Kung-ch'eng Hsueh-pao (Chinese Journal of Mechanical Engineering), Vol 11, No 2, Jun 63, pp 89-95

Translation of Russian Abstract: In modern bearing machine building, the application of a mechanical gage for plant control is one of the widespread methods in the automatization of grinding machines. However, application of this method cannot ensure higher grinding precision. On the basis of the theory of probability and statistical analyses, this paper analyzes in detail the most important factor which affects grinding precision under such automatization and presents the principal method for increasing it.

References: The latest of five Russian references is dated 1962.

C-O-N-F-I-D-E-N-T-I-A-L

C-O-N-F-I-D-E-N-T-I-A-L

(continued)

The author thanks Prof WU Chung-hua for reading his manuscript and for suggesting the writing of Part IV of this paper.

Author's Affiliation: Chinese Academy of Sciences.

C-O-N-F-I-D-E-N-T-I-A-L

CH'IAN Kuo-fang (1730/0943/5364)

"Systematic Analysis of Some Results Obtained From Low-Speed Aerodynamic Testing of Two-Dimensional Turbine Cascades"

Peiping, Chi-hsieh Kung-ch'eng Hsueh-pao (Chinese Journal of Mechanical Engineering), Vol 11, No 2, Jun 63, pp 36-56

Text of English Abstract: In this paper, the author deals with some results obtained in the experimental testing of [26 Czech] two-dimensional turbine cascades.

The following problems are investigated:

1. The influence of air-stream turning angle or cascade reaction, profile, geometric, cascade geometric, and aerodynamic parameters on turbine-cascade profile loss coefficients.

2. The effects of the above-mentioned factors on exit angles of air-streams from cascades.

Some comparison of experimental and calculated results are also given. Simple relations and approximate coefficients, which are useful in practical calculation of turbine stage performance, are obtained.

(continued)

Basing on these results, the author presents important principles concerning the empirical design of various types of low-speed turbine stages.

References: The most recent of 12 references cited is "Aerodynamic Design and Analysis of Turbine Plants," by WU Chung-hua (0491/7559/5114), and HSUEH Ming-lun (5641/2494/0243), Chi-hsieh Kung-ch'eng Hsueh-pao (Chinese Journal of Mechanical Engineering), Vol 11, No 1, 1963.

The author thanks LING Chih-kuang (0407/1307/0342), CH'EN Nai-hsing (7115/0035/2581), and WU Chung-hua for their suggestions and help in the work reported.

Author's Affiliation: Chinese Academy of Sciences.

C-O-N-F-I-D-E-N-T-I-A-L

CHUANG Ch'ien-ting (1641/0467/7844); also (5445/0467/7844)

"The Role of the Fuel Characteristic Coefficient,  $(\beta' = 3.35 \frac{H}{C})$ .  
in the Field of Combustible Mineral Products and Its Applications"

Peiping, Chi-hsieh Kung-ch'eng Hsueh-pao (Chinese Journal of Mechanical Engineering), Vol 11, No 2, Jun 63, pp 1-10

Abstract: English abstract accompanies this article.

References: The most recent reference cited by the author is "The Use of International Data To Prove the Correctness of the New Method of Coal Classification," by CHUANG Ch'ien-ting, Tsing-hua Ta-hsueh Hsueh-pao (Journal of Tsinghua University), Vol 4, No 1, Mar 58.

The article was published posthumously, the author having died in July 1962.

Author's Affiliation: Formerly of Tsinghua University.

WU Ch'eng-k'ang (0702/2110/1660)

LI Yun-wen (2621/0336/2429)

SUN Ming-shan (1327/2494/1472)

"Experimental Study of the Working Process of a Two-Stroke Internal Combustion Pump and Its Analysis"

Peiping, Chi-hsieh Kung-ch'eng Hsueh-pao (Chinese Journal of Mechanical Engineering), Vol 11, No 2, Jun 63, pp 21-34

Abstract: English abstract accompanies this article.

The work reported in the article was undertaken in 1959.

Authors' Affiliation: All of the Chinese Academy of Sciences.

T'ANG Ts'un-pen (0781/1317/2609)

"The Threshold Velocity of Sediment"

Peiping, Shui-li Hsueh-pao (Journal of Hydraulic Engineering),  
No 2, Apr 63, pp 2-12

Excerpts of Chinese Abstract: This paper discusses the conditions under which extremely small particles of mud and sand will begin to move. On the assumption that the stability of the particles in the river bed depends upon adhesion between the particles, as well as the weight of the particles, a combined threshold velocity formula is proposed for coarse and fine sand.

References: Included in the 14 references are 2 American studies dated 1934 and 1935.

Author's Affiliation: Nanking Institute of Hydraulic Engineering.

LI Ch'ung-chih (2621/1504/2535)

"A Study of the Trajectory of the High Velocity Jet From Flip Buckets"

Peiping, Shui-li Hsueh-pao (Journal of Hydraulic Engineering),  
No 2, Apr 63, pp 25-31

Excerpts of Chinese abstract: This paper examines the following problems: (1) major factors influencing the trajectory and (2) conditions creating the highest velocity and method of estimating the trajectory.

The author acknowledges the editorial assistance of TENG Shu-yuan (6772/3219/3050) and CH'IAO Mei-ch'uan (0829/2734/3123) and participation in the research by WANG Fu-hsing (3769/4395/5281), YEN Ying (7051/5391), and CH'ENG Shan-jun (4453/3790/3387).

Author's Affiliation: Northwest Institute of Hydraulic Engineering.

HSU Ts'eng-yen (1776/2582/5888)

"Research on the Characteristics of Deformation of Loess in the Region of Hydraulic Structures"

Peiping, Shui-li Hsueh-pao (Journal of Hydraulic Engineering), No 2, Apr 63, pp 33-41

Excerpts of Chinese abstract: This paper discusses the deformations of loess under the effects of pressure, water content, time, and other factors and the working conditions of various kinds of hydraulic engineering construction. There is also a method for determining the depth and range of deformations in loess under various hydrological and geological conditions.

Author's "Affiliation: Institute of Civil Engineering, Research Academy of Hydraulic Engineering and Hydroelectric Power.

CH'EN Ch'un-t'ing (7115/2797/1656)

"On the Energy Dissipation of High Overflow Dam With Flip Bucket and Estimation of Downstream Local Erosion"

Peiping, Shui-li Hsueh-pao (Journal of Hydraulic Engineering), No 2, Apr 63, pp 13-23

Abstract: English abstract accompanies this article.

The author thanks TS'AI Feng-ch'un (5591/6646/2504) and CHU Jung-lin (2612/2837/2651) for correcting his revised manuscript.

This paper was expanded from a paper by the present author written in December 1960.

Author's Affiliation: Institute of Hydraulic Engineering, Research Academy of Hydraulic Engineering.

C-O-N-F-I-D-E-N-T-I-A-L

CHUNG Lo-hui (6945/2867/2547)

"The Calculation of the Values X and K in the Muskingum Method  
by a Mathematical Approach"

Peiping, Shui-li Hsueh-pao (Journal of Hydraulic Engineering),  
No 2, Apr 63, pp 43-45

Abstract: Not given.

Author's Affiliation: Harbin Architectural College.

CHAO Tzu-tan (6392/1311/0030)

"Calculation of the Suspended Load Under Wave Action"

Peiping, Shui-li Hsueh-pao (Journal of Hydraulic Engineering),  
No 2, Apr 63, pp 45-46

Abstract: Not given.

Author's Affiliation: Tientsin University.



C-O-N-F-I-D-E-N-T-I-A-L

CHANG Chih-ch'i (1728/5347/3825)  
HSIEH Han-chang (6200/3352/4545)

"The Method of Analyzing Thin Reinforced Concrete Spiral Casing  
Considered As a Monolithic Structure"

Peiping, Shui-li Hsueh-pao (Journal of Hydraulic Engineering),  
No 2, Apr 63, pp 49-54

Abstract: Not given.

Authors' Affiliation: Both of the Bureau of Water Conservancy  
and Hydroelectric Power Construction.

CH'EN Hou-ch'un (7115/0624/5028)

"Dynamic Computation of a Gravity Dam"

Peiping, Shui-li Hsueh-pao (Journal of Hydraulic Engineering),  
No 2, Apr 63, pp 55-60

Abstract: Not given.

The author acknowledges the participation of CHOU Kan-fu (0719/  
0051/3637) and LI Kuei-lan (2621/2710/5695) in a part of the  
computation work.

Author's Affiliation: Institute of Structures and Materials,  
Research Academy of Hydraulic Engineering and Hydroelectric  
Power.

C-O-N-F-I-D-E-N-T-I-A-L

CHU Po-fang (2612/0130/5364)

"Vibration of Arch Dams, Shells, and Plates With Special Reference to the Effect of Phase Difference of Ground Displacements"

Peiping, Shui-li Hsueh-pao (Journal of Hydraulic Engineering), No 2, Apr 63, pp 61-64

Abstract: Not given.

Author's Affiliation: Institute of Structures and Materials, Research Academy of Hydraulic Engineering and Hydroelectric Power.

C-O-N-F-I-D-E-N-T-I-A-L

CHU Shih-lin (4555/1102/2651)

"Study of Evapo-transpiration From Rice Paddy"

Peiping, Shui-li Hsueh-pao (Journal of Hydraulic Engineering),  
No 3, Jun 63, pp 1-10

Translation of Chinese Abstract: This paper starts with the concrete characteristics of paddy rice cultivation and carries out a comprehensive analysis of the various factors influencing evaporation and transpiration from rice paddies. It is judged that the phenomenon of evaporation and transpiration from rice paddies is intimately related to the process of growth and development of the rice plant. Moreover, of the external environment conditions, the solar energy factor is primary. Later, on the basis of data from a great many actual experiments in various areas, the paper proposes a method for calculating evaporation and transpiration from rice paddies and a value for the coefficient of average water consumption in individual natural areas, to serve as references for production and study.

(continued)

Part of the research of this paper was completed in 1961.

Author's Affiliation: Institute of Hydraulic Engineering, Research Academy of Hydraulic Engineering and Hydroelectric Power.

C-O-N-F-I-D-E-N-T-I-A-L

TUNG Hsing-lin (5516/5281/2651)

"On the Model Similarity of Water Hammer in Long Pipes and Its Simplified Calculation"

Peiping, Shui-li Hsueh-pao (Journal of Hydraulic Engineering), No 3, Jun 63, pp 24-31

Translation of Chinese Abstract: This paper concentrates on research on conditions of model similarity of water hammer in homogeneous long pipes and assembles actual data on water hammer pressures in water supply pipe line prototypes and models for further analysis, proposing an empirical formula for calculating valve closure water hammer pressures. Finally, there is a simple explanation of the influence of valve characteristics and operation on water hammer pressures.

Author's Affiliation: Institute of Hydraulic Engineering, Research Academy of Hydraulic Engineering and Hydroelectric Power.

CHANG Jui-chin (1728/3843/3866)

"A Review on the Gravitation Theory of Sediment Suspension"

Peiping, Shui-li Hsueh-pao (Journal of Hydraulic Engineering), No 3, Jun 63, pp 11-23

Abstract: English abstract accompanies this article.

Author's Affiliation: Wuhan College of Hydraulic Engineering and Electric Power.

C-O-N-F-I-D-E-N-T-I-A-L

WANG Wen-shao (3076/5113/7300)

"Review on the Seismic Stability of Earth Dams"

Peiping, Shui-li Hsueh-pao (Journal of Hydraulic Engineering),  
No 3, Jun 63, pp 32-48

Abstract: English abstract accompanies this article.

LI Shu-fen (2621/2885/2780) participated in part of the work done  
on this paper.

Author's Affiliation: Institute of Earthworks, Research Academy  
of Hydraulic Engineering and Hydroelectric Power.

T'AN P'ei-lun (6223/1014/0243)

T'AN Lai-chi (6009/1917/1015)

"Calculation for Long-Term Regulation of Varied Irrigation Water  
Supply By Statistical Method"

Peiping, Shui-li Hsueh-pao (Journal of Hydraulic Engineering),  
No 3, Jun 63, pp 56-58

Abstract: Not given.

Authors' Affiliation: Yangtze River Research Academy of Hydraulic  
Engineering and Hydroelectric Power.

C-O-N-F-I-D-E-N-T-I-A-L

HUANG Wen-hsi (7806/2429/3556)

"Application of the 'Equivalent Load Method for Thermal Stresses'  
Model Testing of Arch Dams"

Peiping, Shui-li Hsueh-pao (Journal of Hydraulic Engineering),  
No 3, Jun 63, pp 59-61

Abstract: Not given.

CHU K'o-shan (2612/0163/0810), WANG Ching-ch'1 (3076/2529/3823),  
and CHU Po-fang (2612/0163/5364) brought up many valuable opin-  
ions at a discussion organized by Institute of Structures and  
Materials, Research Academy of Hydraulic Engineering and Hydro-  
Electric Power.

Author's Affiliation: Tsinghua University Research Academy of  
Hydraulic Engineering and Hydro electric Power.

Chemistry, Mathematics, and Physics

CHU Jui-hung (2612/3843/7703)  
YIN Ch'eng-lieh (1438/2110/3525)

"Reaction of 4-Oxymethylene-2, 2, 5, 5-Tetramethylfuranidone-3 With o-Aromatic Diamines -- Synthesis of Derivatives of a Seven-Membered Heterocyclic Compound, Containing Two Nitrogen Atoms"

Peiping, Hua-hsueh Hsueh-pao (Acta Chimica Sinica), Vol 29, No 4, Aug 63, pp 295-300

Translation of Russian Abstract: The aim of this paper is to study the properties of a diazocycloheptatriene system which is of great interest from the point of view of the problem of the presence of aromatic derivatives of these compounds, including, first, their salts. These salts were obtained through the condensation of oxymethylenefuranidone with aromatic amines, wherein condensation products were first formed -- the Schiff basis (90-98 percent yield). We established that oxymethylenefuranidone, reacting with aromatic amines -- for example, with phenylenediamine -- yields a condensation product -- Schiff basis (II). Inasmuch as it is identical to the condensation product derived from 4-chlormethylene-2, 2, 5, 5-tetramethylfuranidone-3 (III), we therefore, consider that

(continued)

the reaction proceeds according to the aldehyde group. We also established that when oxymethylenefuranidone interacts with  $\alpha$ ,  $\beta$ -naphthylenamine, a mixture of the two isomers (V and VI), which can be isolated by the chromatographic method, is formed. The Schiff basis derivatives which we obtained during the hydrochloric acid reaction produce water and convert into corresponding salts (VIIIa-c).

References: Three German, 2 English, one Swiss, 2 Russian, and one Chinese, the latter by YIN of this article, dated 1907-1962.

This paper was received for publication on 22 September 1962.

Authors' Affiliation: YIN, Chemistry Department, Peking Normal University; CHU, a research student of the Teaching and Research Section of the same university.

LO Ching-hui (5012/0530/1979)

"Uranyl Chelates of Schiff Bases"

Peiping, Hua-hsueh Hsueh-pao (Acta Chimica Sinica), Vol 29, No 4, Aug 63, pp 243-248

Text of English Abstract:

1. Eight new chelates have been prepared from uranyl nitrate and Schiff bases, and all of them contain two molecules of nitric acid to satisfy coordination number of uranium which is eight in these complexes.
2. Results of thermogravimetric analysis of these complexes show that the two nitric acid molecules are in the inner sphere and coordinated directly to uranium.
3. Molar conductivities of the complexes in methyl alcohol and pyridine solutions have been determined and the results indicate that they resemble II-I type electrolytes in conductance.
4. Solubilities of the complexes in ethyl alcohol at 25 degrees C have also been determined.

(continued)

References: Four English, three Russian, and three German, dated 1908-1960.

This paper was received for publication on 18 August 1962.

Author's Affiliation: Department of Chemistry, Nanking University.



C-O-N-F-I-D-E-N-T-I-A-L

CHIANG Ming-chien (5592/2494/6197)  
HSIAO Hsu-ling 5135 [an abbreviation for (5618)/4872/3781]  
TAN Mei-kung (2868/5019/0361)

"Telomerization of Ethylene and Ethanol"

Peiping, Hua-hsueh Hsueh-pao (Acta Chimica Sinica), Vol 29, No 4,  
Aug 63, pp 255-258

Text of English Abstract: Telomerization of ethylene and ethanol with di-t-butyl peroxide as initiator has been carried out in auto-clave and in a flow system. It has been found that when the amount of the initiator used varies from 0.75 to 3.75% (vol/vol) of the alcohol charges, the yield of the telomers increases almost linearly and reaches 37% (wt./wt.) of the alcohol charges (in auto-clave); while the efficiency of the initiator, namely, the ratio of the amount of the telomers to that of the initiator, decreases progressively. From the telomeric products, all the alkanols of even carbon atoms from butanol-2 to hexadecanol-2 have been separated and identified.

When hydrogen peroxide is used as initiator and the reaction is carried out at 80 atm., the yields of the telomers are very low. When the pressure is increased to about 250 atm., polyethylene is about eight times the amount of liquid telomers is obtained.

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With cumene hydroperoxide as initiator, telomers in about 8% yield have been obtained, from which alkan-2-ols with n=2-7 have been isolated and identified.

With the redox system of potassium persulfate and sodium bisulfate, no telomeric product has been obtained. In this case, a considerable amount of 2,4-dinitrophenylhydrazine of acetaldehyde has been isolated from the reaction mixture, indicating that, instead of participating in the telomerization reaction, ethanol undergoes oxidation under the action of the redox system.

References: Three English, three US patents, and one German patent, the latter by Esso Research and Engineering Company; date span, 1946-1961.

Authors' Affiliation: All of Institute of Chemistry, Chinese Academy of Sciences.

C-O-N-F-I-D-E-N-T-I-A-L

CHOU Ch'i-ting (0719/0796/7200)  
CHI Ju-yun (4472/3067/6663)

"Serotonin Analogues: 2. The Synthesis of 2-Methyl-3-(Beta-Aminoethyl)-5-Methoxybenzofuran and Its N-Substituted Derivatives"

Peiping, Hua-hsueh Hsueh-pao (Acta Chimica Sinica), Vol 29, No 4, Aug 63, pp 260-265

Text of English Abstract: It was shown by Shaw and Woolley that in a series of closely related derivatives of serotonin, etherification of the phenolic hydroxyl and introduction of a methyl group in the 2-position favored the anti-serotonin activity. In the present work, seven derivatives of 3-(B-aminoethyl)-5-hydroxy-benzofuran, an isomeric compound of serotonin, have been synthesized; each of them carries a methyl group on the 2-position and has its 5-hydroxy group, methylated, the amino group on the side chain being free or substituted.

2-Methyl-3-acetyl-5-hydroxy-benzofuran was methylated with dimethyl sulphate and potassium hydroxide in a mixture of equal amounts of acetone and ethanol. The ether formed was subjected to Willgerodt-Kindler reaction with sulphur and morpholine, giving 2-methyl-3-morpholinothioformylmethyl-5-methoxy-benzofuran (XI), which was reduced with lithium aluminium hydride to 2-methyl-3-(B-morpholinoethyl)-5-methoxybenzofuran (VII), on one hand, and

(continued)

hydrolyzed by potassium hydroxide to 2-methyl-5-methoxy-benzofuran-3-acetic acid (X), on the other hand. X was esterified with methanol. The methyl ester formed the corresponding amide (XIIa) when treated with methanolic ammonia, and the hydrazide (XIII) with hydrazine hydrate. XIII was converted into the acyl azide (XIV). When the latter compound was condensed with ethyl amine, dimethylamine, diethylamine, pyrrolidine, and piperidine, the corresponding amides were obtained. On reduction of various amides (XIIIa-f) with lithium aluminium hydride, the corresponding amines (I-VI) were formed.

References: One English, one Russian, one Scandinavian, one personal communication by a Chinese, and one Chinese reference by the authors of this article.

This paper was received for publication on 31 October 1962.

Authors' Affiliation: Both of Institute of Materia Medica, Chinese Academy of Sciences.

C-O-N-F-I-D-E-N-T-I-A-L

CHIN Te-ch'iu (6855/1795/4428)  
CHANG Ch'ing-lien (1728/7230/5571)

"On the Determination of Deuterium Oxide by Means of the Falling Drop Method"

Peiping, Hua-hsueh Hsueh-pao (Acta Chimica Sinica), Vol 29, No 4, Aug 63, pp 266-275

Text of English Abstract: n-Butyl benzoate is proposed as a new medium for the falling drop method of determination of deuterium oxide in a sample of dilute heavy water. It is suitable for analysis in the concentration range of 0-10.5 mol%  $D_2O$  at working temperatures 22-33.5°C. A mixed medium composed of n-butyl and iso-butyl benzoate in about 1:1 ratio can be applied to analysis for 0-7 mol%  $D_2O$  at working temperatures 21.5-26.5°C. iso-Butyl benzoate can be used at 20.5°C for analyzing 0-4 mol%  $D_2O$ . Calibration curves for these media are shown in Fig 9 and 10\* (in Chinese text). The relative error of determination is about 0.1%.

These media are each subjected to a 500-drop stability test. They possess different periods of adaptation prior to reaching a stable state (Fig 3). Such a "prior-period" effect can be eliminated through previously saturating the medium with water (compare the third and fourth curves in Fig 3).

(continued)

O-Fluorotoluene is a stable medium, a result differing from the observations of Krell et al. [2], who consider it to be "very unstable."

The varying amounts of the residual water on the tip of a micropipet in the form of a spherical segment as a result of releasing previous drops with different sizes are studied. Such variations cause errors in timing the fall of the next drop, which is intended to possess an exactly measured volume. Such a "residual-liquid" effect can be minimized by the design of a fine tip, say 1.4 mm in outer diameter. In this way, the next drops say 8.00  $\mu$ l in size, fall with speeds constant within  $\pm 0.1\%$ .

References: Six English, two German, one Chinese by a Russian, and one Russian reference by CHANG of this article and others.

This paper was received for publication on 30 November 1962.

Authors' Affiliation: Both of Department of Chemistry, Peking University.

YANG Tan (2799/2481)  
 KUAN Hung-mei (7070/1347/5019)  
 LIU Jui-lin (0491/3843/7792)  
 HUANG Tzu-ch'ing (7806/1311/0615)

"Studies of Activity Coefficients of Nonelectrolytes in Aqueous Salt Solutions: 5. The Effects of Salts on the Solubilities of o-Nitrobenzoic Acid in Water"

Peiping, Hua-hsueh Hsueh-pao (Acta Chimica Sinica), Vol 29, No 4, Aug 63, pp 277-283

Text of English Abstract: The solubilities of O-nitrobenzoic acid in aqueous solution of NaCl, KCl, LiBr, NaBr, KBr, KNO<sub>3</sub>, KSCN, NaClO<sub>4</sub>, and (CH<sub>3</sub>)<sub>4</sub>NBr were determined at 25 degrees C.

Following Randall and Failey, some assumptions about the activity coefficients of the ions of O-nitrobenzoic acid in salt solutions were made, and thereby it was possible to calculate the activity coefficients of its undissociated molecules in these solutions. In the range of salt concentrations  $C_s$  studied (the least being 0 to 0.5 n, the largest being 0-1.5 n), the plots of  $\log f_u$  vs.  $C_s$  are all straight lines. Comparison of their slopes yields the salting-out order of the undissociated part of the O-nitrobenzoic acid as follows:

(continued)

NaCl > LiBr > NaBr > KCl > KBr > KNO<sub>3</sub> > NaClO<sub>4</sub> > KSCN > (CH<sub>3</sub>)<sub>4</sub>NBr, in which the order between potassium nitrate and sodium perchlorate is correct only when our assumptions about the activity coefficients are correct.

For the salts with common anion, like bromides, the above order agrees with the order of the sizes of the cations; and for those with common cation, like potassium salts, it agrees with the order of the sizes of the anions.

References: Nine English, two German, and one Chinese, dated 1889-1959.

This paper was received for publication on 9 February 1963; for Part 4, see this publication, Vol 27, 1961, p 119.

Authors' Affiliation: All of Department of Chemistry, Peking University.

C-O-N-F-I-D-E-N-T-I-A-L

TUNG Ts'eng-shou (4547/2582/1108)

"Studies on the Organic Amido-phosphorus Compounds: 3. Synthesis of )-Alkyl Alkylphosphonamides and O, O'-Dialkyl Thiophosphoramides"

Peiping, Hua-hsueh Hsueh-pao (Acta Chimica Sinica), Vol 29, No 4, Aug 63, pp 291-293

Text of English Abstract: A general method for the synthesis of O-alkyl alkylphosphonamides and O, O'-dialkyl thiophosphoramides has been reported. This method is based on the reactions of esters of alkylphosphonous acid and dialkyl thiophosphites with amines in the presence of carbon tetrachloride. The reaction mechanism is discussed.

References: Eight Russian, six English, two Chinese, one Polish, and one Scandinavian, dated 1945-1961.

This paper was received for publication on 6 August 1962. For Part 2, see Hua-hsueh Hsueh-pao, Vol 24, 1958, p 30.

Author's Affiliation: Peking Institute of Medical Sciences.

LIU Ta-chuang (0491/1129/1104)  
HUANG En-ts'ai (7806/1869/2088)  
CHANG Liang-ch'u (1728/6852/3255)  
WANG Fu-an (3769/4395/1344)

"On the Temperature Dependence of the Retention Volumes of Homologues in Gas-Liquid Chromatography"

Peiping, Hua-hsueh Hsueh-pao (Acta Chimica Sinica), Vol 29, No 4, Aug 63, pp 227-234

Abstract: English Abstract accompanied this article.

References: Six English, one Russian, and one Chinese, the latter by the authors of this article, dated 1962.

This paper was received for publication on 23 April 1962.

Authors' Affiliation: All of Department of Chemical Engineering, Monan College of Chemical Engineering.

C-O-N-F-I-D-E-N-T-I-A-L

CHANG Chih-ping (1728/1807/3521)  
LI Ch'eng-tsung (2621/2052/1350)  
HSIEH Hsien-te (6200/0103/1759)

"Electrochemical Mechanism of Anodic Dissolution and Self-Dissolution of Zinc in Potassium Hydroxide Solutions"

Peiping, Hua-hsueh Hsueh-pao (Acta Chimica Sinica), Vol 29, No 4, Aug 63, pp 236-241

Abstract: Polish abstract accompanies this article.

References: Of the 26 references used, almost half were Russian.

This paper was received for publication on 31 July 1962.

Authors' Affiliation: All of Department of Chemistry, Fudan University.

LI Che-ming (0242/0772/2494)  
CHU Chung-fen (2612/0112/5358)  
LIANG Shu-ch'uan (2733/2885/2938)

"On the Solvent Extraction of Tungsten (VI) by Means of N-Benzoyl-N-Phenylhydroxylamine"

Peiping, Hua-hsueh Hsueh-pao (Acta Chimica Sinica), Vol 29, No 4, Aug 63, pp 249-253

Abstract: English abstract accompanies this article.

This paper was received for publication on 20 August 1962.

Authors' Affiliation: All of Institute of Chemistry, Chinese Academy of Sciences.

C-O-N-F-I-D-E-N-T-I-A-L

KAO Hsiao-hui (7559/1321/1863)

"Estimation of Election Affinities and Electronegatives for the Alkalies"

Peiping, Hua-hsueh Hsueh-pao (Acta Chimica Sinica), Vol 29, No 4, Aug 63, pp 284-286

Abstract: English abstract accompanies this article.

This paper was received for publication on 26 February 1962; a revised version was received on 16 September 1962.

Author's Affiliation: Chemical Laboratory, Changchun College of Geology.

HSU Chung-chun (1776/6945/7165)

SIEN Chiao-mai (3382/2403/7796)

"Use of Arsenazo ((( As an Analytical Reagent for Titanium: 1. Detection of Titanium (IV))"

Peiping, Hua-hsueh Hsueh-pao (Acta Chimica Sinica), Vol 29, No 4, Aug 63, pp 288-290

Abstract: English abstract accompanies this article.

This paper was received for publication on 25 July 1962; a revised version was received on 20 January 1963.

Authors' Affiliation: Both of Department of Chemistry, East China Normal University.

C-O-N-F-I-D-E-N-T-I-A-L

WU Hsueh-mou (0702/1331/6180)

"On Bieberbach Polynomials"

Peiping, Shu-hsueh Hsueh-pao (Acta Mathematica Sinica), Vol 13,  
No 2, May 63, pp 145-151

Abstract: Not given.

This paper was received for publication on 30 April 1958; a corrected draft was received on 16 August 1962.

Author's Affiliation: Institute of Mathematical Computation Techniques, Chinese Academy of Sciences.

HUNG Sheng (7895/2573)

"Fourier Analysis on Unitary Group (III) Convergence Criteria"

Peiping, Shu-hsueh Hsueh-pao (Acta Mathematica Sinica), Vol 13,  
No 2, May 63, pp 152-161

Abstract: Not given.

This paper was received for publication on 29 September 1961; a corrected draft was received on 31 October 1962.

Author's Affiliation: Chinese University of Science and Technology.



C-O-N-F-I-D-E-N-T-I-A-L

HSIEH T'ing-fan (6200/1656/5672)

"The Best Approximation of Periodic Differentiable Functions by Trigonometric Polynomials"

Peiping, Shu-hsueh Hsueh-pao (Acta Mathematica Sinica), Vol 13, No 2, May 63, pp 162-169

Abstract: Not given.

This paper was received for publication on 2 January 1962; a corrected draft was received on 24 July 1962.

Author's Affiliation: Hangchow University.

SHEN Hsieh-ch'ang (3088/5610/2490)

"On the Closure of  $[z^{\tau n} \log^j z]$  in a Domain of Complex Plane"

Peiping, Shu-hsueh Hsueh-pao (Acta Mathematica Sinica), Vol 13, No 2, May 63, pp 170-192

Abstract: Not given.

The author expresses thanks to his teacher, Prof A. F. Leontiev, for directing the work.

References: Of 22 references dated 1923 to 1961, 17 are in Russian, 2 in Chinese, and one each in English, French, and German.

This paper was received for publication on 1 April 1962; a corrected draft was received on 20 June 1962.

Author's Affiliation: Peking University.

C-O-N-F-I-D-E-N-T-I-A-L

CHANG Kung-ch'ing (1728/1872/1987)

"Theory of Distributions of S Type and Pansions"

Peiping, Shu-hsueh Hsueh-pao (Acta Mathematica Sinica), Vol 13, No 2, May 63, pp 193-203

Abstract: Not given.

This paper was received for publication on 2 April 1962; a corrected draft was received on 19 November 1962.

Author's Affiliation: Peking University.

CHANG Shang-t'ai (1728/0006/3141)

"Continuity and Total Continuity of Urysohn Operator"

Peiping, Shu-hsueh Hsueh-pao (Acta Mathematica Sinica), Vol 13, No 2, May 63, pp 204-215

Abstract: Not given.

The author extends thanks to KUO Ta-chun (6753/1129/6874) for his direction in the writing of this paper.

This paper was received for publication on 16 April 1962; a corrected draft was received on 19 October 1962.

Author's Affiliation: Shantung University.

C-O-N-F-I-D-E-N-T-I-A-L

TING Kuang-kuei (1353/0342/2710)

"The Resonance Theorem for Noncomplete Space"

Peiping, Shu-hsueh Hsueh-pai (Acta Mathematica Sinica), Vol 13,  
No 2, May 63, pp 216-222

Abstract: Not given.

This paper was received for publication on 24 April 1962; a corrected draft was received on 16 August 1962.

Author's Affiliation: Nankai University.

C-O-N-F-I-D-E-N-T-I-A-L

C-O-N-F-I-D-E-N-T-I-A-L

FANG Te-chih (2455/1795/2784)

"Researches on a Pair of Plane Curves With a Representable Singular Point of Order  $(m, n)$ "

Peiping, Shu-hsueh Hsueh-pao (Acta Mathematica Sinica), Vol 13, No 2, May 63, pp 223-230

Abstract: Not given.

References: The 5 references include 2 papers by SU Pu-ch'ing (5685/2975/7230) and 3 by the present author, one of them not yet published.

This paper was received for publication on 7 May 1962; a corrected draft was received on 25 May 1962.

Author's Affiliation: Amoy University.

CHANG Su-ch'eng (1728/4790/6134)

"On the Classification of Mappings of  $K^{n+r}$  Into  $S^n$ "

Peiping, Shu-hsueh Hsueh-pao (Acta Mathematica Sinica), Vol 13, No 2, May 63, pp 231-237

Abstract: Not given.

This paper was received for publication on 10 May 1962.

Author's Affiliation: Institute of Mathematics, Chinese Academy of Sciences.

C-O-N-F-I-D-E-N-T-I-A-L

WU Fang (0702/2455)

"The Lattice-Points in an Ellipse"

Peiping, Shu-hsueh Hsueh-pao (Acta Mathematica Sinica), Vol 13,  
No 2, May 63, pp 238-253

Abstract: Not given.

References: Of 8 references, 5 are dated 1928 to 1942.

This paper was received for publication on 25 May 1962, and a corrected draft was received on 23 November 1962.

Author's Affiliation: Institute of Mathematics, Chinese Academy of Sciences.

WANG Sheng-wang (3769/5116/2598)

"The Converse of a Theorem of Ladyzhensky for the Complete Continuity of the Urysohn Operator"

Peiping, Shu-hsueh Hsueh-pao, (Acta Mathematica Sinica), Vol 13,  
No 2, May 63, pp 254-261

Abstract: Not given.

The author extends thanks to the examining personnel for their enthusiastic assistance.

This paper was received for publication on 29 May 1962; a corrected draft was received on 12 October 1962.

Author's Affiliation: Nanking University.

C-O-N-F-I-D-E-N-T-I-A-L

C-O-N-F-I-D-E-N-T-I-A-L

P'AN Ch'eng-tung (3382/2110/3159)

"A Note on the Large Sieve Method and Its Applications"

Peiping, Shu-hsueh Hsueh-pao (Acta Mathematica Sinica), Vol 12, No 2,  
May 63, pp 262-268

Abstract: Not given.

This paper was received for publication on 29 June 1962.

Author's Affiliation: Shantung University.

CHIANG Tse-p'ei (3068/3419/1014)

"The Prediction Theory of Multivariate Stationary Processes (I)"

Peiping, Shu-hsueh Hsueh-pao (Acta Mathematica Sinica), Vol 13,  
No 2, May 63, pp 269-298

Abstract: Not given.

This article was received for publication on 16 August 1962; a corrected draft was received on 15 October 1962.

Author's Affiliation: Peking University.

C-O-N-F-I-D-E-N-T-I-A-L

CH'EN Ching-jun (7115/2529/3387)

"The Pattice-Points in a Circle"

Peiping, Shu-hsueh Hsueh-pao (Acta Mathematica Sinica), Vol 13,  
No 2, May 63, pp 299-313

Abstract: Not given.

This paper was received for publication on 27 September 1962.

Author's Affiliation: Institute of Mathematics, Chinese Academy  
of Sciences.

C-O-N-F-I-D-E-N-T-I-A-L

C-O-N-F-I-D-E-N-T-I-A-L

T'AN Tso-wu (6223/0155/2976)

"Approximation Method for Determining the Amount of Energy Dissipated in a Circuit With Variable Parameters"

Peiping, Wu-li Hsueh-pao (Acta Physica Sinica), Vol 19, No 4, Apr 63, pp 259-267

Translation of Russian Abstract: Direct determination of the amount of energy admitted into a circuit with variable parameters from the source during the transition process and the energy loss in effective resistances during the same time along the transient current and voltage becomes difficult with respect to solving differential equations with variable parameters of the circuit. Such a solution is rather difficult to estimate even for a circuit of average complexity. This paper demonstrates how to avoid difficulties in solving such equations and approximately estimate the energy for the established current and voltage before and after commutation. The cited method is applied to regularly fluctuating circuits with variable parameters.

This paper was received for publication on 4 June 1962; the final draft was received on 20 August 1962.

Author's Affiliation: Institute of Electrical Engineering, Chinese Academy of Sciences.

HSTN Hsien-chieh (1823/6343/2638)

"The Method of Simulating a Helically Invariant Magnetic Field"

Peiping, Wu-li Hsueh-pao (Acta Physica Sinica), Vol 19, No 4, Apr 63, pp 215-224

Abstract: English abstract accompanies this article.

The author expresses thanks to WANG Ch'eng-shu (3769/2110/2579) and LI Cheng-wu (2621/2973/2976) for their reading of this paper.

This paper was received for publication on 31 August 1962.



C-O-N-F-I-D-E-N-T-I-A-L

LIEN Wei-ken (2651/3634/1626)  
CHUNG Hsiang-li (6988/4382/4409)

"A New Method of Calculating the Characteristic Impedances of Transmission Lines"

Peiping, Wu-li Hsueh-pao (Acta Physica Sinica), Vol 19, No 4, Apr 63,  
pp 249-258

Abstract: English abstract accompanies this article.

This paper was received for publication on 31 August 1962.

WU Yu (2976/1342)

"Heat Conduction in a Square Cylinder With Circular Bore"

Peiping, Wu-li Hsueh-pao (Acta Physica Sinica), Vol 19, No 4,  
Apr 63, pp 268-270

Abstract: Not given.

This paper was received for publication on 27 November 1962.

C-O-N-F-I-D-E-N-T-I-A-L

LIU Ch'ang-fu  
LIANG K'un-miao (2733/2492/8693)

"On High Current Super Conductivity"

Peiping, Wu-li Hsueh-pao (Acta Physica Sinica), Vol 19, No 4, Apr 63,  
pp 271-272

Abstract: Not given.

This paper was received for publication on 23 July 1962.

Authors' Affiliation: Both of Nanking University.

CHOU Pang-shin (0719/6721/2450)

"A Study of the Plastic Deformation of Single Crystals of  
Molybdenum"

Peiping, Wu-li Hsueh-pao (Acta Physica Sinica), Vol 19, No 5,  
May 63, pp 285-295

Abstract: English abstract accompanies this article.

The author expresses thanks to Prof CH' IEN Lin-chao (6929/5259/  
3564) and Prof LI Heng-te (2621/1854/1795) for their proofreading  
of this paper and their valuable opinions.

This paper was received for publication on 12 March 1962.

C-O-N-F-I-D-E-N-T-I-A-L

CHOU Pang-hsin (0719/6721/2450)

"Cold Rolled and Recrystallization Textures of Molybdenum Single Crystals"

Peiping, Wu-li Hsueh-pao (Acta Physica Sinica), Vol 19, No 5, May 63, pp 297-305

Abstract: English abstract accompanies this article.

This paper was received for publication on 12 March 1962.

C-O-N-F-I-D-E-N-T-I-A-L

C-O-N-F-I-D-E-N-T-I-A-L

HUANG Hung-chia (7806/1347/0857)  
CH'EN Ching-jen (6929/2529/0088)

"The Concept of Impedance-Perturbation As Applied to Imperfect Wave Guides"

Peiping, Scientia Sinica, Vol 12, No 9, Sep 63, pp 1285-1310

Text of English Abstract: In this paper, imperfect wave guides are analyzed on the basis of the concept of impedance-perturbation introduced in a previous paper. For a long-distance wave guide, the statistics of various wave-guide imperfections are treated consistently by employing this unique concept. Maximum allowable mean-squared value of the impedance-perturbation is calculated for a specified added loss caused by random wave-guide irregularities of an arbitrary form.

For the dielectric-coated wave guide and the helix, formulas are derived for computing the impedance-perturbations due to different forms of wave-guide irregularities. With these, the calculated value of the maximum allowable impedance-perturbation sets the limits for various constructional defects appearing most frequently in wave-guide practice.

(continued)

As a preliminary study of the above subject, normal modes of a nonconventional wave guide with a pair of arbitrary wall impedances is investigated. An impedance parameter in terms of both of the anisotropic impedances is introduced, and the analysis is featured by its extensive use of the perturbation algebra in the derivation of approximate formulas, which are sufficiently accurate for many cases of practical interest.

The authors express thanks to Prof MA Ta-yu (7456/1129/3731) for reading the manuscript and giving valuable suggestions for its improvement.

This paper was received for publication on 23 April 1963.

Authors' Affiliation: Both of Institute of Electronics, Chinese Academy of Sciences.

LI Kuei-sheng (2621/2710/3932)

"Calculation of Input Impedance of a Cable-Fed Top-Short-Circuited Probe in Wave Guide"

Peiping, Scientia Sinica, Vol 12, No 10, Oct 63, pp 1507-1523

Text of English Abstract: In this paper, the input impedance of a cable-fed top-short-circuited probe in wave guide is calculated in consideration of the actual effect of a hole in the wave-guide wall caused by the feeding cable. The formulas obtained, therefore, need not include such a divergent series that would be introduced by the gap-effect associated with the assumed fictitious source. Moreover, these formulas may be used to correct the results obtained from the assumption of constant current in the probe. The input admittance of a cable-fed full-size probe in parallel plates has been calculated accurately. These results were then extended to the case of wave-guide and others; the validity of such extensions has been proved. When applied to the input admittance of a "box-type" slot antenna, they agree well in experimental and theoretical results.

This paper was received for publication on 7 January 1963.

TAI An-pang (2071/1344/6732)

"A Theory of Polymerization of Silicic Acid"

Peiping, Scientia Sinica, Vol 12, No 9, Sep 63, pp 1311-1320

Text in English.

This paper was received for publication on 28 April 1963.

Author's Affiliation: Department of Chemistry, Peking University.

C-O-N-F-I-D-E-N-T-I-A-L

CHANG Te-ho (1728/1795/7901)

"A Study of the Infrared Spectra of Epoxy During the Course of Cure"

Peiping, Scientia Sinica, Vol 12, No 9, Sep 63, pp 1398-1402

Text in English.

References: Among the 8 references listed is an item, which the present author coauthored with CH'IN Wen-mou (4440/2429/2021) and CH'EN Jen-yuan (6929/0086/0337), published in Hua-hsueh Hsueh-pao (Acta Chimica Sinica), 28, 181, 1962.

This paper was received for publication on 29 January 1963.

Author's Affiliation: Institute of Chemistry, Chinese Academy of Sciences.

CHOU Wei-shan (0719/4850/0810)

YIN Chih-hua (3009/5347/5478)

HUANG Ming-lung (7806/7687/7893)

"Studies on the Santonin-Reihe X: The Absolute Configuration of the C<sub>11</sub>-Methyl Group of Alpha-Santonins"

Peiping, Scientia Sinica, Vol 12, No 9, Sep 63, pp 1402-1406

Text in German.

This paper was received for publication on 3 June 1963.

Authors' Affiliation: All of Institute of Organic Chemistry, Chinese Academy of Sciences, Shanghai.

C-O-N-F-I-D-E-N-T-I-A-L

HUEI Tsu-t'ung (2710/4371/2717)  
HO I (0149/3015)

"Correction on a Segment of Sol and Swelling of Radiationally Cross-Linked High Polymers and Their Final Correction"

Peiping, Scientia Sinica, Vol 12, No 10, Oct 63, pp 1585-1588

Text in Russian.

This paper was received for publication on 25 June 1963.

HUA Hui-chen (5478/1920/3791)  
HUN Wan (1926/3834)  
KAO Hsiao-hsia (7559/1420/7209)

"The Catalytic Hydrogen Wave of Antimony"

Peiping, Scientia Sinica, Vol 12, No 10 Oct 63, pp 1588-1589

Text in English.

This paper was received for publication on 11 July 1963.

Authors' Affiliation: All of Department of Chemistry, Peking University.

C-O-N-F-I-D-E-N-T-I-A-L

TSOU Yuan-hsi (6760/0337/8764)

"A Correlation Between the Solubility of Krypton and the Volume of Holes in Liquid Lead and Tin"

Peiping, Scientia Sinica, Vol 12, No 10, Oct 63, pp 1589-1591

Text in English.

This paper was received for publication on 17 July 1963.

Author's Affiliation: Institute of Metallurgy, Chinese Academy of Sciences.

MIN Szu-ho (7036/0843/7729)

"On Concrete Examples and the Abstract Theory of Generalized Analytic Functions"

Peiping, Scientia Sinica, Vol 12, No 9, Sep 63, 1269-1283

Text in English.

This paper was received for publication on 30 August 1963.

Author's Affiliation: Peking University.



C-O-N-F-I-D-E-N-T-I-A-L

HAO Ping-hsin (6787/6855 /0014/2450)

"Highest Dimensional Commutative Subalgebras of a Real Form of Simple Lie Algebras"

Peiping, Scientia Sinica, Vol 12, No 9, Sep 63, p 1393

Text in English.

This paper was received for publication on 16 January 1963.

Author's Affiliation: Peking Normal University.

TAI Yuan-pen (2071/0337/2609)

"The Behavior of the Scattering Amplitude for a Highly Singular Potential"

Peiping, Scientia Sinica, Vol 12, No 9, Sep 63, pp 1395-1398

Text in English.

This paper was received for publication on 10 June 1963.

Author's Affiliation: Chinese Academy of Sciences.

C-O-N-F-I-D-E-N-T-I-A-L

C-O-N-F-I-D-E-N-T-I-A-L

LI Te-yuan (2621/1795/0337)

"On a Single Inequality for a Parabolic Operator"

Peiping, Scientia Sinica, Vol 12, No 10, Oct 63, pp 1425-1467

Text in Russian.

This paper was received for publication on 14 July 1961.

YUEH Ching-chung (1471/2529/0022)

"Cohomology Operations and Duality in a Manifold"

Peiping, Scientia Sinica, Vol 12, No 10, Oct 63, pp 1468-1487

Text in English.

This paper was received for publication on 16 January 1963.

Author's Affiliation: Institute of Mechanics, Chinese Academy of Sciences.

C-O-N-F-I-D-E-N-T-I-A-L

C-O-N-F-I-D-E-N-T-I-A-L

KAO Ch'ung-shou (7559/1504/1108)

"On the New Possible Hyperon Resonances  $Y_1^{***}$  and  $\Xi^{***}$ "

Peiping, Scientia Sinica, Vol 12, No 9, Sep 63, pp 1393-1395

Text in English.

The author expresses thanks to Prof HU Ning (5170/1380) for his interest and support.

This paper was received for publication on 23 May 1963.

Author's Affiliation: Department of Physics, Peking University.

C-O-N-F-I-D-E-N-T-I-A-L

ORGANIZATIONS AND CONFERENCES

1. New Aeronautical Group Established

The Preparatory Committee of the China Aeronautical Engineering Society (Chung-kuo Hang-k'ung Hsueh-hui) was recently established officially in Peiping.

The Preparatory Committee of the China Aeronautical Engineering Society is composed of 22 persons, including professors and specialists from our country's aeronautical science and research organizations, aeronautical high-level institutions, the Bureau of Civil Aviation, and other units. Prof CH'EN Yuan (3088/0337), Deputy Director of the Peking Aeronautical College, will take over the responsibility of head of the committee.

The Preparatory Committee of the China Aeronautical Engineering Society recently held its first general meeting, during which it was decided to open the first plenary meeting in 1964 and that the meeting will promote discussion papers and other academic activities. (Peiping, Jen-min Jih-pao, 8 Oct 63, p 2)

2. Scientific and Technical Associations Hold Conference

The China Scientific and Technical Association and the World Federation of Scientific Workers opened the preparatory committee of the 1964 science discussion conference. The meeting was held in Peiping from 27 to 30 September 1963.

Attending this meeting were scientists from 21 nations of Asia, Africa, Latin America, and Pacific Islands. After meeting for 4 days, the committee issued a report stating that it had decided to hold a science discussion conference in Peiping in August 1964. The conference will last from 7 to 8 days. The languages used at the conference will be Chinese, English, French, and Spanish. It was decided that scientific papers and abstracts would be needed at the conference next year and that the papers should be submitted by 30 April 1964. (Peiping, Kuang-ming Jih-pao, 1 Oct 63, p 3)

3. Conference on Soil Mechanics and Foundations Engineering

China's experts and professors in soil mechanics attended the 2-9 December 1962 scientific conference at the Tientsin Science Hall, which conference was jointly sponsored by the Soil Mechanics and the Foundations Engineering Scientific Committees of the Chinese Society of Civil Engineers (T'u-mu Kung-ch'eng Hsueh-hui 0960/2606/1562/4453/1331/2585) and the Tientsin Soils and Foundations Society (T'ien-chin T'u-jang Ti-chi Hsueh-hui 1131/3160/0966/1015/1331/2585).

About 100 observers besides the registered delegates attended. Forty technical papers were read and discussed, including "The Development of Soil Mechanics and Foundations Engineering in China," by NI Lung-p'an (0242/1702/3961), deputy director of the Research Institutes of Architecture and Construction of the Ministry of Building, and other papers by such experts as CH'EN Liang-shen (7115/2733/3932), CHIANG P'eng-nein (5592/1756/1628), HUANG Ch'iang (7806/1730), and LU Chao-chun (4151/5128/6874). (Peiping, Tu-mu Kung-ch'eng Hsueh-pao, Vol 9, No 1, Jan 63, pp 96,2

C-O-N-F-I-D-E-N-T-I-A-L

4. Chinese Medical Association Board Members' Convention

Over 200 persons, including experts in the various medical specialties and members of the national board of directors of the Chinese Medical Association, attended the convention of that board which was held in Peiping on 13-15 March 1962. FU Lien-chang (0265/6647/8517), president of the association, summed up the work of the association since 1956, and CH'LEN Hsin-chung (6929/0207/1813) spoke on the association's future tasks.

The achievements of the association in the following areas were brought up: deepening the political consciousness of members; uniting Western-style and traditional doctors in cooperative practice; conducting conferences, symposia, etc., on the national and regional levels; publicizing popular medical information; publications work; radio and television broadcasting; and revamping the association's member societies.

As reported, the association currently publishes two comprehensive medical journals: Chung-hua I-hsueh Tsa-chih (National Medical Journal of China) and Chinese Medical Journal in English. In addition, it publishes periodicals in the following medical specialties: internal medicine, surgery, pediatrics, and gynecology-obstetrics. Preparations were being made, it was noted, to resume publication of eight medical journals in the following specialties: dermatology, public health,

(continued)

stomatology, oto-rhino-laryngology, neuropsychiatry, pathology, ophthalmology, and radiology. Some achievements have been made in the mutual exchange of medical literature with foreign countries.

Preparatory committees have been formed to see to the organization of two new member societies, the Society of Physical Therapy and the Society of Acupuncture and Moxibustion.

In discussions on the Association's future tasks, it was pointed out that more information should be given to the masses on controlled child-bearing. (Peiping, Chung-hua P'i-fu-k'o Tsa-chih [Chinese Journal of Dermatology], Vol 9, No 1, 1963, p 68) (CONFIDENTIAL)

C-O-N-F-I-D-E-N-T-I-A-L

5. Yunnan Radiology and Tuberculosis Societies Hold Joint Sessions

The Radiology and Tuberculosis Societies of the Yunnan Provincial Medical Association held four joint scientific conferences on topics of mutual interest during the period September-December 1962. At the first of these conferences, WANG An-chih (3769/1344/0037), president of the Yunnan Provincial Tuberculosis Hospital, explained the Soviet system of classifying tubercular diseases under ten main categories and pointed out some important considerations in using that system of classification.

The second of the joint conferences featured reports from the major medical institutions in Kunming on actual cases tuberculosis which were misdiagnosed as some other illnesses. At the third conference, LIY Ch'ung-chih (0491/1504/2535), professor of surgery at Kunming Medical College, gave a statistical report of the results of operative surgery in the treatment of pulmonary tuberculosis at his college in the past 5 years. At the last conference, K'O Ch'eng-liang (2688/2052/2856), vice head of the Radiology Teaching and Research Section, Kunming Medical College, gave a summary report on behalf of both societies. (Kunming, Hsueh-shu yen-chiu [Scientific Research], No 2, Feb 63, pp 65, 53) (CONFIDENTIAL)

6. Activities of Medical Societies in Nan-ch'ang

Topics discussed at scientific activities held in January 1963 by [member societies of] the Kiangsi Provincial and Nan-ch'ang Municipal Medical Associations included the following: adrenal cortical hormone in the treatment of cardiovascular disease (Society of Internal Medicine); roentgen examination of bladder function and foreign body in esophagus (Society of Radiology); water-electrolyte balance problems in surgery (Society of Surgery); bacterial food-poisoning (Society of Medical Technology); impetigo variolosa (Society of Dermatology); plastic surgery in repair of nose defects (Society of Stomatology); characteristics of the X-ray picture of interest to pediatricians (Society of Pediatrics); clinical experience with asthma and Chinese traditional medical treatment of hepatitis (Society of Chinese Traditional Medicine); and survey of immunity to diphtheria in Nan-ch'ang, toxicity of and labor protection against carbon disulfide and hydrogen sulfide, and preliminary survey of the health of 3,534 school children during 3 months of the academic year (Society of Hygiene). (Peiping, Chung-hua I-hsueh Tsa-chih, Vol. 49, No 2, Feb 63, p 85) (CONFIDENTIAL)

7. Wuhan Conference on Gynecology and Obstetrics

The Wuhan Society of Gynecology and Obstetrics held a scientific conference in Hankow, on 8-14 January 1963, with support from the Hunan Provincial and Wuhan Municipal Medical Associations. The conference was attended by 87 delegates from 17 different provinces and municipalities. Prof LIN Ch'iao-chih (2651/1564/4460) and WANG Shu-chien (3769/3219/6297), who are specialists in gynecology and obstetrics and chairman and vice-chairman, respectively, of the Society of Gynecology and Obstetrics of the national Chinese Medical Association, were present.

The principal theme was "Common Diseases of Women--Pathogenesis, Prevention, and Treatment." Discussions on planned childbearing and on plans for research in gynecology and obstetrics were also held. Thirty of the 160 medical papers received were read in general meetings. Others were presented in group sessions. --Reported by Liao Ming-ming (1675/2494/2494). (Peiping, Chung-hua I-hsueh Tsa-chih, Vol 49, No 2, Feb 63, p 88) (CONFIDENTIAL)

8. History and Activities of Kiangsi Anatomy Society

The Society of Anatomy (Chieh-p'ou Hsueh-hui 6034/0472/1331/2585) of the Kiangsi Provincial Medical Association (Chiang-hsi-sheng I-yao-wei-sheng Hsueh-hui 3068/6007/4164/6829/5522/5898/3932/1331/2585) was founded in July 1954 under the guidance of the provincial chapter of the All-China Federation of Scientific Societies. It was originally called the "Anatomical Society of China Nan-ch'ang Branch" but adopted the present name in 1959.

The society holds on scientific activity every 2 weeks to encourage scientific research in and better teaching of anatomy. In these respects, it has made some definite achievements. Its members have written a total of 88 scientific research papers on the following, among other subjects: observations on the vascular system of Chinese national body measurements, affect of acupuncture on the organism, experimental embryology, descriptive embryology, technical improvements, etc. -- Reported by HU Chien-hua (5170/1796/5478) of the Chiang-hsi I-yao (Kiangsi Medicine) Editorial Board. (Peiping, Chung-hua I-hsueh Tsa-chih, Vol 49, No 2, Feb 63, p 125) (CONFIDENTIAL)



9. Conference on Abdominal Surgery in Wuhan

The Wuhan Municipal Medical Association held a conference on abdominal surgery on 20-26 April 1963, which was attended by delegates from 26 provinces, municipalities, and autonomous ch'us. Some of China's outstanding surgeons such as SKEN K'o-fei (3088/0344/7237), HUANG Chia-ssu (7806/1367/7475), and WU Chieh-p'ing (0702/7132/1627) were present.

The conference received 244 medical papers dealing with surgery of the liver (39), portal hypertension (39), calculi in liver and bile ducts (21), and other subjects (145). Eighty-five of the papers were read and discussed during the meetings. They were of a relatively high level and included analyses of clinical data, reports of animal experiments, procedures for testing changes in metabolism and biochemistry, and reports of pathological examinations. (Peiping, Chung-hua Wai-k'o Tsa-chih /Chinese Journal of Surgery/, Vol 11, No 6, Jun 63, p 510)

10. Academic Activities of Tuberculosis Societies

The Tuberculosis Society of the Liaoning Medical Association and the Tuberculosis Society of the Shenyang Municipal Branch of the Chinese Medical Association met in 1963 in order to advance the scientific atmosphere, strengthen science activities, and raise the level of tuberculosis treatment. It was decided that the Friday afternoon of the first week of each month will be for special academic reports on tuberculosis and Friday afternoon of the third week of each month will be for discussions and diagnoses of insoluble sample tuberculosis cases.

T'UNG Yu-heng (0157/3768/5899), Director of the Liaoning Provincial Tuberculosis Control Clinic, TSOU Ming (6760/2494), Deputy Director of the Liaoning Provincial Tuberculosis Control Clinic, and Dr CHOU Ch'eng-wu (0719/1701/2976) reported on characteristics of chemical therapy for tuberculosis and tuberculosis bacillus and also on preventive measures and treatment in clinical use of antituberculosis drugs. (Peiping, Chung-kuo Fang-lao Tsa-chih /Chinese Journal of Tuberculosis Prevention/, Vol 4, No 1, 30 Apr 63, p 65) (CONFIDENTIAL)

11. Annual Meeting of Tuberculosis Conference

The Tuberculosis Society of the Port Arthur-Dairen Medical Association and the Port Arthur-Dairen Municipal Branch of the Chinese Tuberculosis Prevention Society, on 3, 8, and 22 February 1963 held the joint annual 1962 conference.

FANG K'an (2455/0170), chairman of the conference, reported on the work done in 1962. The annual meeting received a total of 26 papers, 12 of which were discussed at the conference. (Peiping, Chung-kuo Fang-lao Tsa-chih /Chinese Journal of Tuberculosis Prevention/, Vol 4, No 1, 30 Apr 63, pp 65-66) (CONFIDENTIAL)

12. Delegation of Nurses Hold Conference

A delegation of nurses from 13 provinces and municipalities recently held an academic conference in Tsinan. At this conference, they exchanged nursing experiences regarding bedridden patients.

The conference received 190 papers which expressed the great raising of the level of science and quality of nursing work in these provinces and municipalities in the last few years. LING Shan-shan (0407/3790/3790), Assistant Director of the Department of Nursing, Shanghai Sixth People's Hospital, submitted a paper at the conference. A paper received from the Department of Neurosurgery, Peking Hsuan-wu Hospital, entitled "How To Eliminate Bed Sores," showed that in the patients treated from January 1960 to June 1963 there were 87 paralytic cases due to the removal of some part and 419 cases of unconscious patients due to brain injuries; of these numbers, the longest period of unconsciousness reached 195 days; some of the patients have been in the hospital for as long as 3 years. However, due to them receiving very good nursing care, none of these patients developed bed sores.

This conference was held under the guidance of the China Nursing Society. A total of 80 people attended the conference from all over China. (Peiping, Kuang-ming Jih-pao 12 Oct 63, p 1)

13. First Nationwide Entomological Conference on Ticks and Mites

Recently, in Ch'ang-ch'un, the Chinese Entomological Society convened the first Scientific Discussion Conference concerning ticks and mites. Development of research and study of ticks and mites and other problems were discussed at the conference. (Kuang-ming Jih-pao, 15 Oct 63, p 1)

14. Pedology Conference

Chinese pedologists recently submitted more than 270 papers at the annual 1963 meeting of the Chinese Pedology Society in Shenyang. Pedologists have also been promoting research in many fields lately concerning some important questions regarding the pedology of our country. The papers expressed the fact that in the last 3 years scientists in China have done much investigation into fertilizers for rice, wheat, large beans, and other crops and found that pedology of various sorts has a bearing on the uses of fertilizer. (Peiping, Jen-min Jih-pao, 9 Oct 63, p 1)

15. Geological Survey Work Conferences

During the Summer of 1963, some 50 persons attended area survey work conferences at the Northwest Geological Bureau and the East China Institute of Geology. Besides summing up work experiences and discussing various area survey problems, the purpose of these conferences was to draw up long-rang survey plans for areas in Northwest China and East China. During these conferences, scientific papers were presented and geological maps displayed. (Peiping, Chung-kuo Ti-chih [China Geology], No 7, Jul 63, p 6) (CONFIDENTIAL)

16. Experimental Work Conference

On 3-11 May 1963, the Ministry of Geology called a National Conference of Chiefs of Experimental Work Laboratories mainly to summarize the basic experimental work of 1962, as well as read just, consolidate, firm-up, and elevate the quality of geological work and to find tactful solutions to the numerous technological bottle-necks of today, while assigning to the chiefs experimental work responsibilities for 1963. Attending the conference at Hangchow were chiefs of experimental laboratories of the geological bureaus and chief engineers and key technologists from the provinces, cities, and autonomous districts. Some 60 persons attended the meetings and heard Vice-Minister of Geology, HSU Chieh (6079/2638), deliver the key address in which he emphasized the basic work of petrology, mineralogy, and also the importance of processing and selecting mineral ores. (Peiping, Chung-kuo Ti-chih [China Geology], No 7, Jul 63, p 24) (CONFIDENTIAL)

C-O-N-F-I-D-E-N-T-I-A-L

17. Confetence on Sand Control

The Chinese Academy of Sciences held a confetence on sand control recently at Yin-ch'uan for the purpose of examining the results of 8 years of research in sand control on the T'eng-ko'li Desert. The confetence was attended by specialists in geography, foresty, and botany, and discussed both biological and mechanical methods of sand control. (Canton, Chung-kuo Hsin-wen, 12 Oct 63, p 1)

18. Conference on Utilization of Grasslands

The Chinese Animal Husbandry and Veterinary Society recently held the 1963 annual confetence at Urumchi. A total of 441 papers was received. The major topic at this year's confetence was the improvement and utilization of grasslands. (Peiping, Jen-min Jih-pao, 9 Oct 63, p 1)

C-O-N-F-I-D-E-N-T-I-A-L

19. Science Confetence on Agriculture To Open in Harbin

Before long, the China Agricultural Mechanization Society will open the first science conference in Harbin on mechanization for furrowing. They will inquire into the technology and principles of furrowing mechanization. (Peiping, Kuang-ming Jih-pao, 5 Oct 63, p 2)

C-O-N-F-I-D-E-N-T-I-A-L

MANPOWER AND EDUCATION

1. Over 190 Colleges Will Admit Graduate Students in 1964

In 1964, over 190 colleges from all over the country will admit graduate students. This number will be comparatively larger than for 1963. The students will represent various fields including literature, industry, agriculture, and medicine.

The students will be under the guidance of noted scientists and professors CHOU P'ei-yuan (0719/1014/3293), CHIEN San-ch'iang (6929/0005/1730), HUA Lo-keng (5478/5012/1649), SU Pu-ch'ing (5685/2975/7230), CHAO Chiu-chang (6392/0046/4545), YANG Shih-hsien (2799/4258/0341), PEI Wen-chung (5952/2429/0022), LU Shu-hsiang (0712/0647/3276), LIANG Szu-ch'eng (2733/1835/2052), TING Ying (0002/4481), and LIN Ch'iao-chih (2651/1564/4460) and other accomplished researchers and teachers. (Canton, Chung-kuo Hsin-wen, 14 Oct 63, p 6)

2. Development of High-Level Education in Peking

The following colleges and universities are listed as being in Peiping: Peking Post and Telecommunications College, Peking College of Government and Law, Peking Motion-Picture College, Peking Normal University, Peking Medical College, Peking Iron and Steel Industries College, Peking Petroleum Industry College, Peking Geology College, Tsinghua University, Peking University, Central Nationalities College, Chinese People's University, Peking College of Foreign Languages, and other colleges and universities.

There are 125,000 students in the colleges and universities in Peiping. Altogether Peiping has 23,000 to 24,000 college teachers; including 1,500 to 1,600 professors and assistant professors, 4,600 to 4,700 lecturers, and 16,000 to 17,000 teaching assistants.

In 1957, Tsinghua University had 59 laboratories; but by 1962 the number has increased to 81.

Prior to the liberation, Peiping colleges and universities provided personnel for China's construction; for example, Peking University, from 1898 to 1948, graduated only 6,600 odd students; but for the 10 years since the liberation, the graduates have numbered 7,877. In the 13 years since the liberation, Peking Normal University has had 11,380 graduates.

(continued)

Since the liberation, Peiping has started many single subject technical schools such as Peking Petroleum Industries College, Peking Geology College, Peking Mining College, Peking Iron and Steel College etc. Each year these technical schools are providing many specialized personnel.

Now in the various colleges and universities in Peiping, the students of minority nationalities number 3,000 to 4,000; the majority of these are in the Central Nationalities College training in specialized courses for construction the areas of minority nationalities. There are 2,300 to 2,400 returned overseas Chinese students.

Among the total number of college students at the present time, there are about 25 percent female students. Of the students in the several Medical Colleges in Peiping 60 to 70 percent are female students.



3. Peiping Graduate Students

One hundred and fifty graduate students in the fields of literature, science, engineering, agriculture, medicine, and physical culture recently graduated from the more than 10 higher level schools in Peiping. These graduate students studied from 3 to 3½ years.

This year, over 20 graduate students graduated from Peking University in more than 10 specialized fields, including philosophy, law, history, Chinese literature, foreign languages, mathematics, physics, and biology. (Peiping, Kuang-ming Jih-pao, 7 Oct 63, p 1)

4. Graduate Students

In China in 1963, more than 800 graduate students were admitted by over 160 higher level schools and research organs. The majority were graduated this year from universities. Some of them were working personnel from production units, scientific research units, schools, and organizations.

This year, over 100 higher level schools, including Peking University and Tsinghua University, registered more than 500 graduate students. The over 50 institutes of the Chinese Academy of Sciences registered more than 200 graduate students. This year, the 7 institutes under the departments of the central government admitted their first graduate students and registered over 20 of them.

The graduate students who were admitted this year were selected from over 10,000 examinees. (Peiping, Jen-min Jih-pao, 14 Oct 63, p 1)

5. College Teachers

A young teaching force of higher education is expanding in Peiping. Now, the number of teachers in colleges and universities in Peiping has increased 12 times compared with the preliberation period. Most of them were trained after the liberation. These young teachers constitute a powerful force in the fields of teaching and scientific research. Since the liberation, Peiping has established the following agricultural universities: Peking Agricultural University, Peking Agricultural Mechanization College, and Peking Forestry College -- boasting over 1,400 teachers. (Canton, Chung-kuo Hsin-wen, 8 Oct 63, p 7)

6. Canton Medical College Graduates First Class

The Canton Medical College, founded in 1958, this year graduated its first class of 225 students. In addition to their classwork, these students took part in practical work at the eight hospitals in the city. (Canton, Yang-ch'eng Wan-pao, 7 Aug 63, p 1)

7. Night University Trains Technicians

The night university of the An-shan Iron and Steel Company recently graduated a group of 125 students. In the past 10 years, this university has graduated more than 1,000 students. Most of these graduates have taken positions as technicians at An-shan Iron and Steel Company. For example, almost one half of the nucleus of technicians in the metallurgical equipment section of An-shan Design Academy are graduates of this university. (Canton, Chung-kuo Hsin-wen, 3 Oct 63, p 10)

8. Geology Training Class, 1963

The first basic leadership cadre training class was graduated in mid-February 1963 after more than 2 months of intensive study. This training class, sponsored by the Hopeh Committee of the Bureau of Geology (Ho-pei Sheng Ti-chih Chu Wei-yuan-hui), consisted of chiefs from the production brigades and teams, branch secretaries, some key geologists, and cadres in the administrative-control field. (Peiping, Chung-kuo Ti-chih [Chinese Geology], No 3, 1963, pp 11-14) (CONFIDENTIAL)

C-O-N-F-I-D-E-N-T-I-A-L

9. Announcement of the Ministry of Geology

In November 1962, the Ministry of Geology issued a "Directive for the Basic Training of Cadres on a Rotation Basis." As a result, at the National Conference of All Geological Bureau (Office) Chiefs, all leaders of bureaus (offices) were requested to train their basic cadres, consolidate their work experiences, and bring up important matters for discussion on their daily agenda so as to be certain to do a good job. At present, many geological bureaus (offices) of the provincial, city, and autonomous governments such as in Kwangtung and Hopeh provinces have initiated basic leadership cadre training work on a rotating basis .... This journal -- published by the Ministry of Geology -- has enumerated in this issue many experiences encountered by the Party Committee of the Hopeh Bureau of Geology. (Peiping, Chung-kuo Ti-chih [Chinese Geology] No 3, 1963, pp 10-11 (CONFIDENTIAL))

C-O-N-F-I-D-E-N-T-I-A-L

## NEW PUBLICATIONS AND BOOK REVIEWS

1. Chemical Publications

The following publications were briefly commented upon on the last page of the source cited below:

Chi T'i-se-ts'eng Fa (Gas Chromatographic Methods), by M. Kh. Karapet'yants, translated by SHEN Pao-ch'eng (3947/5508/6134);

T'an-ch'ing-hua Ho-wuti Fu-tien ho Pao-ho Cheng-ch'i-ya (Boiling Point, Saturation, and Vapor Pressure of Hydrocarbon Compounds), By A.I.M. Carleman and CH'ENG Kuang-yueh (4453/0342/6885);

T'ing-lie Yeh-hsiang Yang-hua (Hydrocarbon Liquid Phase Oxidation), by N.M. Emanuel, translated by HSI Tsu-wei (1153/4371/1218); and

Chung-Kuo K'o-hsueh Yuan Kao-fen-tzu Hsueh-hui I-hui K'an, 1961 (Publication of the Chinese Academy of Sciences High Polymer Technical Conference, 1961), Work Report Conference on High Polymer Physical Chemistry, Chinese Academy of Sciences. (Peiping, Hua-hsueh Hsueh-pao /Acta Chimica Sinica/, Vol 29, No 3, Jan 63, p 227)

2. New Chemistry Text

The Higher Level Texts Editorial Department of the People's Education Publishing House has recently compiled and edited Yu-chi Hua-hsueh Shih-yung Chiao-k'o-shu (An Experimental Textbook on Organic Chemistry). This book is reviewed by the Organic Chemistry Teaching and Research Section of Ch'eng-tu Engineering College. (Peiping, Hua-hsueh T'ung-pao /Chemistry Bulletin/, No 1, Jan 63, pp 60-62)

3. Biochemistry Publication

The Science Press in Peiping recently published Tan-pai chih Hua-hsueh Yen-chiu Chi-shu (Research Technology in Protein Chemistry), edited by P'AN Chia-hsiu (3382/1367/4423) and others. (Peiping, Sheng-wu Hua-hsueh yu Sheng-wu Wu-li Hsueh-pao /Acta Biochimica et Biophysica Sinica/, Vol 3, No 2, Jun 63, p 249)

4. New Publications of Civil Engineers Society

The Chinese Society of Civil Engineers has recently published Ti-san-chieh Tai-piao-ta-hui chi 1962-nien Nien-hui Hui-k'an (Proceedings of the Third /National/ Congress and the 1962 Annual Meeting of the Chinese Society of Civil Engineers). It contains selected papers on the safety of engineering structures, which papers were presented at the annual meeting. Papers presented at the meeting concerning building structures, railroad bridges, traffic engineering, and municipal engineering, respectively, are published in separate volumes. Collected papers of the First Scientific Conference on Soil Mechanics and Foundations Engineering are being processed for publication. (Peiping, T'u-mu Kung-cheng Hsueh-pao /Chinese Journal of Civil Engineering/, Vol 9, No 1, Jan 63, p 17)

5. Scope of Reference Work on Surgery Enlarged

The second edition of the first and only giant-size reference work on surgery which is of Chinese authorship will be published in August 1963 by Peoples Medical Publishers, Peiping. The new edition of Wai-k'o-hsueh (Surgery), edited by SHEN K'o-fei (3088/0344/7237) and others, has 51 chapters and contains information on the following subjects which were not included in the first edition: history of surgery, bacterial infections of the antibiotics era, blood plasma substitutes, outline of oncology, the skull and brain, congenital and acquired heart diseases, extracorporeal circulation, abdominal ailments, orthopedic surgery, and military surgery under battle conditions.

The names of 73 Chinese persons who participated in the writing of the above reference work are listed in the article but omitted herein. (Peiping, Chung-hua Wai-k'o Tsa-chih [Chinese Journal of Surgery], Vol 11, No 6, Jun 63, inside back cover.)

6. Book on Radiology Published

In November 1962, the Shanghai Scientific and Technical Publishers published a book, entitled Chin-shu X She-hsien Hsueh [Metals and X-Ray Technology] (Reprints from Hsien-tai Yeh-chin [Modern Metallurgy]), by HSIU Shun-sheng (6079/7311/3932). (Peiping, Ch'uan-kuo Hsin-shu-mu [National Bibliography of New Books], No 11, 1 Jun 63, p 7)

7. Handbook Prepared by Institute of Geodetics and Cartography

The Geodetic Section of the Institute of Geodetics and Cartography (Ts'e-liang Chih-t'u Yen-chiu-so; 3261/6852/0455/0956/4282/4496/2076), Chinese Academy of Sciences, has recently prepared a new book, titled Ta-ti Ts'e-liang Tsao-piao Mai-shih Shou-ts'e (Handbook on the Erection of Markers and Burial of Stones in Geodetic Surveying), to be issued by China Industrial Press, (Peiping, Ch'uan-kuo Hsin-shu-mu [National Bibliography of New Books], No 5, 1 Mar 63, p 15

8. Shanghai Publishers Announce New Books

The source cited below has announced the publication of a group of scientific and technical books, including ten translations from foreign publications and nine titles by Chinese authors, by the Shanghai Scientific and Technical Publishers. The original Chinese works include the following two titles:

Tien-hsing Ch'un (Classic Sets), by HUA Lo-keng (5478/5012/1649) and WAN Che-hsien (5502/0772/0341)

T'ian-hua-kuei Kao-wen Pan-tao-t'i (High Temperature Carborundum Semiconductors), Vol 2, by ERH Shih (3799/4258) (Peiping, Jen-min Jih-pao, 12 Oct 63, p 6)



9. Publication of New Books Planned

The source cited below has listed a number of new books which will be published by Science Press during during the last quarter of 1963 and January and February of 1964. These new publications included 15 translations of foreign books and 7 by Chinese authors. Among the original Chinese works are the following two titles of special interest:

Wei-po Yuan-li (Microwave Principles), Volume II, by HUANG Hung-chia (7806/1347/0857)

Tzu-tung-hua Chi-shu Chin-ghan (Progress in Automation Technology) (No 1), by WANG Hsin-min (3769/2450/3046) et al. (Peiping, Jen-min Jih-pao, 19 Oct 63, p 6)

10. New Book on Types of Fish in the South China Sea

The Institute of Zoology and Institute of Oceanology, both of the Chinese Academy of Sciences, and the Shanghai Fisheries College have compiled a book entitled Nan-hai Yu Lei-chih (Species of Fish in the South China Sea). In 1954-1959, these three institutes did a joint investigation of the species of fish in the South China Sea and altogether obtained more than 30,000 species. (Peiping, Sheng-wu-hsueh T'ung-pao [Biology Bulletin], No 2, Mar 63, p 9)

11. New Book on Types of Fish in East China Sea

Recently, the Shanghai Institute of Aquatic Products, Institute of Zoology, and Institute of Oceanology, all of the Chinese Academy of Sciences, and the Shanghai Fisheries College have compiled a book entitled Tung-hai Yu Lei-chih (Species of Fish in the East China Sea). (Peiping, Kuang-ming Jih-pao, 8 Oct 63 p 1)

12. Chinese Zoological Atlas

CH'EN Hsin-tao (7115/1800/7118) and others have compiled a new book entitled Chung-kuo Tung-wu T'u-p'u Pien-hsing-tung-wu (Fu Niu-hsing-tung-wu) (Chinese Zoological Atlas Platyhelminthes (and Nemertini)). This book was published by the Science Press in January 1963. (Peiping, Sheng-wu-hsueh T'ung-pao /Biology Bulletin/, No 2, Mar 63, inside back cover)

13. New Book on Earth Science

Hsi-tu Kuang-wu Hua-hsueh (Rare Earth Mineral-Chemistry), by KUO Ch'eng-chi (6753/2110/1015), is published by the China Industrial Press in Peiping. This book contains the compilation and proper description of 225 kinds of rare earth minerals as published in various documents prior to 1960. It discusses the chemical structure and formation of these rare elements and also supplies sufficient and correct data on mineral ores, as well as the latest theories in geo-chemistry of some rare earth elements which were erroneously established in the past. (Peiping, Chung-kuo Ti-chih [China Geology], No 7, Jul 63, p 33 (CONFIDENTIAL))

14. Publication on Rare Elements ( a Translation)

Hsi-yu Ho Fen-san Yuan-su Te Kuang-p'u Ting-liang Tse-ting (A Quantitative Survey Treatise on the Distribution of Rare Elements), by A. K. Rusanov [a Russian] and translated by YUAN Hsuan-hui (5913/3763/2547), is published by the China Industrial Press in Peiping. This book contains several years of compilation of Soviet experiences in analyzing mineral ores. The entire book is divided into two parts: (1) an introduction to basic theories and also to equipment for mineral analysis and (2) direct method of studying the distribution and the chemical analysis of rare elements. (Peiping, Chung-kuo Ti-chih [China Geology], No 7, Jul 63, p 33) (CONFIDENTIAL)

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15. Russian Book on Ore Prospecting Translated

Sha-kuang Chao-kuang Chi-ch'u (Fundamentals for Ore Prospecting From Placers), by G. A. Il'inskiy [Russian] and translated by CHUN Shan (7165/1472), is published by the China Industrial Publishing Society in Peiping. This book contains basic information on the formation of placers, on the location of sites for mine prospecting, on the general method of inspecting and analyzing placers, and aeroprospecting methods and special information on topographic surveys, etc. (Peiping, Chung-kuo Ti-chih [China Geology], No 7, Jul 63, p 33)  
(CONFIDENTIAL)

C-O-N-F-I-D-E-N-T-I-A-L

FOREIGN TRAVELS AND CONTACTS

1. Cuban Electronic and Automation Delegation Leaves China

On 14 October 1963, a Cuban Electronics and Technical Automation Investigatory Team, led by Quito Munoz, chief of the Bureau of Automation and Electronics, Ministry of Industry, left China by plane. At the airport to see them off were WANG Shih-kuang (3069/1102/0342), Vice-Minister of the Fourth Ministry of Machine Building; TU Kan-chin (2629/1626/6855), Deputy Director of the Bureau of Foreign Economic Contact; and other concerned personnel.

Prior to the Cuban team leaving, WANG Cheng-ts'eng (3769/6154/2582), Minister of the Fourth Ministry of Machine Building, gave a banquet. Attending the banquet were WANG Shih-kuang (3069/1102/0342), TU Kan-chin (2629/1626/6855), and Pino Santos, Cuban Ambassador to China. (Peiping, Jen-min Jih-pao, 16 Oct 63, p 3)

2. Chinese Architecture Delegation to Cuba

A group of 19 persons from the Chinese Architecture Delegation are attending the Seventh Plenary Meeting of the International Architecture Society. YANG T'ing-pao (2799/1694/1405), Vice-Chairman of the International Architecture Society and a Deputy Director of the Chinese Architecture Society, is chief of the delegation. LIU Chien-chang (0491/1696/4545), Vice-Minister of the Ministry of Railways, and LIANG Szu-ch'eng (2733/1835/2052), a Deputy Director of the Chinese Architecture Society, were deputy chiefs of the delegation which left on 13 October 1963 by plane for Havana via Moscow and Prague.

YANG Ch'un-mao (2700/2504/5399), a Vice-Minister of the Ministry of Railways, and others saw them off at the airport. (Peiping, Chin-jih Hsin-wen, 14 Sep 63, p 3)

3. International Conference of Architects in Cuba

YANG T'ing-pao (2799/1694/1405), Deputy Director of the Chinese Architects Society and Vice-Chairman of the International Architects Society, led a delegation of eight to attend the Seventh Plenary Session of the International Architects Conference. After attending this conference, on 6 October 1963 the delegation left Havana by plane for Mexico where they will participate in the Eighth Plenary of the International Architects Conference. (Peiping, Jen-min Jih-pao, 10 Oct 63, p 3)

4. Cuban Hospital Director Visits China

On 8 October 1963, Juan Walacio Sanchez, Director of the Moa Municipality, Oriente Special District Hospital, arrived by plane for a visit at the invitation of the China Ministry of Health. (Peiping, Chin-jih Hsin-wen, 9 Oct 63, p 4)

C-O-N-F-I-D-E-N-T-I-A-L

5. Chinese Medical Delegation Leaves for Rome

On 7 October 1963, WU Ying-k'ai (0702/5391/1956) and two others left Peiping for Rome to represent the Chinese Medical Association at the 20th International Surgical Conference. (Peiping, Chin-jih Hsin-wen, 9 Oct 63, p 4)

6. Chinese Tuberculosis Prevention Society Sends Delegates to Rome

On 13 October 1963, a delegation from the Chinese Tuberculosis Prevention Society left Peiping by plane for Rome to attend the 17th International Tuberculosis Conference. Director of the delegation is P'ENG Yen (1756/3508); Assistant Director of the delegation is WU Ying-k'ai (0702/5391/1956), who is already abroad. (Peiping, Chin-jih Hsin-wen, 14 Oct 63, p 2).

7. Vietnamese Present Awards to Chinese Construction Engineers

On 11 October 1963, Vu Van Huong, Vietnamese Consul-General in Canton, at the North Vietnamese Consul General's office, represented the North Vietnamese Government in giving friendship medals to LIAO Pin-ch'ang (1675/1755/2490), a construction worker from Kwangtung Province, and eight other workers who helped in the construction in North Vietnam. Of the eight receiving the medals, five were engineer, assistant engineer, chief of survey detachment, and technicians of the Kwangtung Academy of Construction Design. Three personnel have accepted an invitation to go to Hai-ning Province, North Vietnam, to help design office buildings and bridges. (Canton, Chung-kuo Hsin-wen, 15 Oct 63, p 11)

8. Argentinian Ophthalmologist Visits China

Fullaner Guerrero, noted ophthalmologist from Argentina, on 18 October 1963 arrived in Peiping by plane to visit at the invitation of the Chinese Medical Association. (Peiping, Jen-min Jih-pao, 19 Oct 63, p 3)



9. Foreign Medical Delegations Leave Peiping

Burma, Mongolia, Pakistan, and other medical delegations who had been invited by the Chinese Medical Association to our country to participate in the Eighth Nationwide Surgical Scientific and Technological Conference, on 2 October 1963, left Peiping separately by plane for Nanking, Shanghai, and other places to visit.

At the airport to see them off were FANG Shih-shan (2455/4258/3790), Deputy Director of the Chinese Medical Association, Deputy Secretaries OU Yang-ching (2962/7122/4552) and FU I-ch'eng (0265/0001/6134), and others. (Peiping, Chin-jih Hsin-wen, 5 Oct 63, p 6)

10. Japanese Medical Delegation

A four-man delegation of the New Japan Doctors Association and the All-Japan Federation of Democratic Medical Agencies, led by Professor FUKUDA Tamotsu, arrived in Peiping by air, on 14 September 1963, to attend the Eighth Surgical Conference of the Chinese Medical Association. Welcoming them at the airport was FANG Shih-shan (2455/4258/3790), vice-president of the Chinese Medical Association. (Peiping, Chin-jih Hsin-wen, 16 Sep 63, p 2)

11. Albanian Scientific and Technical Delegation

The Albanian scientific and technical cooperation delegation, led by Ilijas Reka, chairman of the Albanian group of the Joint Committee for Sino-Albanian Scientific and technical Cooperation and First Vice Minister of Agriculture, arrived in Peiping by air on 2 October to attend the eighth meeting of the joint committee. On hand to greet them were LO Shu-chang (5012/0647/4545), chairman of the Chinese group of the Joint Committee and Vice Minister of Light Industry, and TU Kan-ch'uan (2629/1631/0356), Deputy Director-General of the Central Bureau of Foreign Economic Relations, among others. Mihal Pali, First Secretary of the Albanian Embassy in China, was also present. (Peiping, Jen-min Jih-pao, 3 Oct 63, p 3)

12. Luminescence Conference in Minsk

T'AN Man-ch'i, affiliated with Moscow State University and the Institute of Chemical Physics, Academy of Sciences USSR, was one of more than 370 persons from 30 cities in the USSR to attend the 11th Conference on Luminescence (Molecular Luminescence and Luminescence Analysis) held in Minsk on 10-15 September 1962. Over 180 reports were read at the 23 sessions. T'AN's paper, coauthored with Yu. A. Vladimirova and F. F. Litvina, was titled "Study of Very Weak Luminescence (Semi-Luminescence) During Germentative Processes." (Moscow, Uspekhi Fizicheskikh Nauk, Vol 80, No 4, Aug 63, p 695)

## MISCELLANEOUS

L. Three Years of Chinese Accomplishments in Surgery

At the recent Chinese national conference on surgery, HUANG Chia-ssu (7806/1367/7475), president of the Chinese Academy of Medical Sciences, presented a report on Chinese accomplishments and developments in surgery during the past 3 years. The primary fields reviewed were abdominal surgery, wound surgery, cardiovascular surgery, and urosurgery. The report pointed out that in abdominal surgery, the extensive excision of the liver is no longer a rare operation in China and that a great deal of experience has been gained in recognizing the causes and diagnosing bleeding in the liver and bile duct. Work has also been done on the treatment of burns, and the cure of persons having burns on 80 percent or more of the skin area is no longer an isolated case. In the field of urosurgery, good results have been obtained by new Chinese diagnostic methods. (Canton, Chung-kuo Hsin-wen, 3 Oct 63, pp 9-10)

2. Bacteria Enzyme Desizing Found To Be Highly Effective and Inexpensive

China has successfully experimented with a method of bacterial enzyme desizing. Recently several printing and dyeing factories have made use of this method. The new desizing method is utilizing a type bacteria that is produced from a white enzyme and used on desizing textiles.

The method of making the bacterial enzyme is cheap and the cost is low. The bacterial enzymes used in desizing 40 meters of textiles is only 0.0016 yuan. The Peking Printing and Dyeing Plant substituted the bacterial enzyme in place of pancreatin for desizing; in one year, it was possible to save 90,000 yuan. (Peiping, Jen-min Jih-pao, 15 Oct 63, p 2)

3. New Insecticide Product

The Institute of Plant Protection, Chinese Academy of Agricultural Sciences, has been successful in conducting research on a new type of insecticide product using DDT thick emulsion. This insecticide is for the prevention and control of cotton bud and other harmful insects on cotton.

The Institute of Plant Protection began research on DDT thick emulsions in 1960. After obtaining initial success in 1962 at the Peking Agricultural Insecticide Plant, experimental production was launched. (Peiping, Kuang-ming Jih-pao, 15 Oct 63, p 2)

4. Appointments and Dismissals by State Council

The following is a name list of appointments and dismissals approved by the 135th session of the plenary meeting of the State Council held on 14 September 1963. Appointments: YUAN Chien-ch'i (5913/6015/7871), MA Hsing-yuan (7456/2622/0997), and CHOU Shou-ch'ang (0719/1343/2052) as vice-presidents of Peking Geological College; CHU Ya-chieh (2612/0068/0267) as vice-president of Peking Petroleum College; HU Lin (5170/7792) as vice-president of Kiangsi Metallurgy college; KU I-sun (7357/1355/1327) as vice-president of T'angshan Railroad College; T'UNG Lei (0157/4320) as president of Peking Agricultural Mechanization College; LIU Shu-chou (0491/6615/0719) as president of Shanghai Chiao-tung University; WANG Chi-yen (3769/7139/1484) as president of Chiaotso (3542/0155) Mining Institute; HSIUNG Ch'uan-ch'i (3574/0278/4388) as president of Anshan Iron and Steel Institute; and SUNG Ching-ming (1345/0403/2494), HSU Chih-pin (6079/1807/1755), WU Ta-chang (0702/1129/4545), and YANG Hui-min (2799/1920/3046) as vice-presidents of Anshan Iron and Steel Institute.

(continued)

Dismissals are as follows: LIU Hsi-yao (0491/6007/1031) from his post of vice-chairman of the Scientific and Technological Commission; WANG Fa-wu (3769/4099/2976) from his post of president of the Peking Institute of Chinese Traditional Medicine; HSIAO Ying (5618/5391) from his post of vice-president of Peking Geological College; KUO Shih (6753/4258) from his post of president of Sian Metallurgy Institute; TS'AO Hai-po (2580/3189/3134) from his post of vice-president of China Scientific and Technical University; and FU Ch'ing-hua (0265/3237/5478) from his post of vice-president of Peking Agricultural University. (Peiping, Jen-min Jih-pao, 8 Oct 63, p 2)

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~~C-O-N-F-I-D-E-N-T-I-A-L~~

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- CHANG Hsiu-cheng (1728/0208/2398), Chen-chiang Drug Manufacturing Plant; author of an article, "A Description of a Simple Fractional Distillation Apparatus." (Peiping, Yao-hsueh T'ung-pao (Pharmaceutical Bulletin), Vol 9, No 1, Apr 63, pp 40-41)
- CHANG Ku-ts'ai (1728/6253/2088), Golden Remedies Teaching and Research Section of Nanking Traditional Medical College; author of an article, "On the Symptoms and Treatment of Hettle Rash." (Shanghai, Shang-hai Chung-i-yao Tsa-chih, No 6, Jun 63, p 29)
- CHANG Hing-hua, Leningrad Institute of Experimental Medicine, Academy of Medical Sciences USSR; author of the article, "Electrophysical Investigation of Pulsation in the Depressor Nerve During the Action of Ionizing Radiation," in Russian; received for publication 31 October 1962. (Moscow, Byulleten' Eksperimental'noy Biologii i Meditsiny, Vol 56, No 9, Sep 63, pp 37-41)
- CHANG Ting-Chao (1728/1353/6856), author of an article, "Carbon Electrodes Used in Spectral Analysis and Their Purity of Manufacture." (Peiping, Hua-hsueh T'ung-pao (Chemistry Bulletin), No 1, Jan 63, pp 34-37)
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- CH'EN Ch'ing-yun (7115/1937/0061), author of an article, "Ionic Reactions of Olefins Containing Flourine." (Peiping, Hua-hsueh T'ung-pao, No 1, Jan 63, pp 15-22)
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CH'EN Kuang-yueh, Moscow Chemical Engineering Institute imeni D. I. Mendeleev and Szechwan University; coauthor with M. Kh. Karapet'yants of article, "Comparative Calculation Method in Polar Coordinates," in Russian; received for publication on 14 January 1963. (Moscow, Akademiya Nauk SSSR, Zhurnal Fizicheskoy Khimii, Vol 37, No 10, Oct 63, pp 2351-2353)

CH'EN Li-ch'eng (7115/0500/2052)

WU Chin-pang (0702/6855/2831)

HSU Ching-chih (1776/7234/2535)

All of the Chinese Traditional Massage Outpatients Clinic of the Shanghai Chinese Traditional Medical College; coauthors of an article, "Clinical Analysis of 66 cases of Diarrhea in Children Treated with Massage." (Shanghai, Shang-hai Chung-i-yao Tsa-chih, No 6, Jun 63, p 34)

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CH'EN Ping-huan (7115/3521/2719), surgeon, chief of Neurosurgery Department, I-wu Hospital, Peiping. (Canton, Chung-kuo Hsin-wen, 11 Oct 63, p 6)

CH'EN Sen-ch'iang, Moscow Institute of Petrochemical and Gas Industry imeni I. M. Gubkin; coauthor with V. A. Dolitskiy of article, "Characteristics of the Occurrence of Sandstone at the Pashiy Horizon in the Shkapov Petroleum Deposits," in Russian. (Moscow, Neftegazovaya Geologiya i Geofizika, No 5, 1963, pp 22-26)

CH'ENG Erh-ch'ang, Moscow Machine Tool Building Institute; author of dissertation for the scientific degree of Candidate of Technical Sciences, "Investigation of the Elimination of Vibration in Polishing Machines," in Russian. (Moscow, Vestnik Mashinostroyeniya, Vol 43, No 8, Aug 63, p 92)

CHENG Hsien-yu (6774/6343/5148), Institute of Parasitology, Chinese Academy of Medical Sciences; author of an article, "A Large 'So' (Chinese approximation of foreign names) Extractor for Laboratory Use." (Peiping, Yao-hsueh T'ung-pao (Pharmaceutical Bulletin), Vol 9, No 1, Apr 63, p 41)



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 CHANG Shao-yao (4545/4801/1031), Hangchow Botanical Garden  
 HUNG T'ao (3163/3447), Nanking Forestry College  
 CHU Cheng-te (2612/2398/1795), Nanking Forestry College  
 CHAO Ch'i-seng (6392/1142/0300), Nanking Forestry College  
 Coauthors of article, "New Kinds of Industrial Trees and  
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 Congress; deputy governor of Honan Province; member of  
 Department of Philosophy and Social Sciences, Chinese  
 Academy of Sciences; president of Chengchow University;  
 member of CCP; died 10 October 1963. (Peiping, Kuang-  
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- CHIA Jung-ch'iang (6328/2837/1730), associate in Radiology,  
 Pao-t'ou First Municipal Hospital; author of a multiple-  
 case report, entitled "Idiopathic Mediastinal Emphysema."  
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- CHOU Chin-kuang (0719/6855/1684), Kiangsu T'ai-chou Municipal Clinic; author of an article, "Automatic Water Level Alarm." (Peiping, Yao-hsueh T'ung-pao (Pharmaceutical Bulletin), Vol 9, No 1, Apr 63, pp 41-42)
- CHOU Ming-chen (0719/2494/6966) Institute of Vertebrate Paleontology and Paleoanthropology, Chinese Academy of Sciences; author of an article, "Recent Advances in Vertebrate Paleontology Research in the Past Several Years." (Peiping, Sheng-wu-hsueh T'ung-pao (Biology Bulletin), No 2, Mar 63, pp 3-5)
- CHOU Pen-ch'ang (0719/2609/2490), Pharmacy Room, Hospital No 230, People's Liberation Army; author of article, "Elimination of White Spots Produced on Injection Bottle Stoppers During the Process of Sterilization by Using Plastic Coatings or Plastic Stoppers." (Peiping, Yao-hsueh T'ung-pao (Pharmaceutical Bulletin), Vol 9, No 1, Apr 63, pp 35-36)
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- CHU Tsung-liang, Moscow Aviation Institute imeni Sergo Ordzhonikidze; author of the dissertation for the scientific degree of Candidate of Technical Sciences, "Investigation of Rotational Failure," in Russian. (Moscow, Vechernayaya Moskva, 13 Jun 63, p 4)
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CHU Yu-ting (2613/5940/7844), Institute of Animal Husbandry,  
Chinese Academy of Agricultural Sciences

WU Yu-ch'en (0702/5124/1369), Peking Institute of Animal Husbandry  
and Veterinary Medicine

LU Chin-ch'eng (2619/6855/1004), Animal Husbandry and  
Veterinary Medicine Station, Fang-shan Hsien, Peiping

LIU Feng-ts'un (0491/7685/1317), Ho-shih-men Animal Farm,  
Fang-shan Hsien

Coauthors of an article, "A Preliminary Analysis, Methods  
of Obstetrics, and the Results Thereof Regarding the  
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CH'U Yun

CH'U Wang

WANG P'u-t'ao Photographers correspondents for an article,  
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CHU Yun-ch'ing (6175/0061/3237)

TS'AN Nan-shan (5591/0589/1472)

Both of the Human and Animal Physiology Teaching and  
Research Section of the Department of Biology, Fu-tan Biology  
Fu-tan University, and of the Asthma Section, Sixth  
People's Hospital of Shanghai; coauthors of an article,  
entitled Preliminary Report on the Effect of Ch'i-kung  
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Bronchial Asthma Patients. (Shanghai, Shang-hai Chung-  
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HAO Shou, author of article, "Various Homogenous Patterns for  
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HO Shang-pin (0149/1424/2430) of the Pharmacology Teaching and  
Research Section, Anhwei Medical College; author of a  
research report, entitled "The Pharmacology of Guanethidine,  
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Prof HSING Wen-jung (6717/2429/6954). (Peiping, Chung-hua  
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- HSIAO Kang-jou (5618/0474/2677), Forest Research Institute, National Academy of Forest Science; author of article, "A synopsis of Chinese Sawflies of the Subfamily Cephalciinae (Hymenoptera, Pamphiliidae), (Peiping, Lin-yeh K'o-hsueh (Scientia Silvae), Vol 8, No 1, Jan 63, pp 15-26)
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- HSIEH Kao-yang (6200/7559/7132), author of an article, "A new Kind of Electron-Structure Periodic Chart Recommended." (Peiping, Hua-hsueh T'ung-pao, No 1, Jan 63, pp 52-54)
- HSU Hsi-ying (1776/6932/3841), Nan-ch'ang Third Hospital  
SHEN Kung-kua (3947/0501/6624), Pharmacy, First Hospital under Kiangsi Medical College  
Coauthors of an article, "Test Production of Fibrin." (Peiping, Yao-hsueh T'ung-pao (Pharmaceutical Bulletin), Vol 9, No 1, Apr 63, pp 36-37)
- HSU Yu-wu, Institute of High Molecular Compounds, Academy of Sciences USSR; coauthor with S. S. Skorokhodov and A. A. Vansheydt of article, "Synthesis of Substituted N-Vinyl-Acetanilides-", in Russian; received for publication on 23 July 1962. (Moscow, Akademiya Nauk SSSR, Zhurnal Obshchey Khimii, Vol 33, No 9, Sep 63, pp 2935-2938)
- HU Chang-lin (5170/7022/7792), author of an article, entitled "Computation of Water Table According to Data on Ground Water Activity Using the Hydro-Geological Parametric Method," (Peiping, Chung-kuo Ti-chih (Chinese Geology) No 3, 1963, pp 23-24)
- HU Ch'ing-mei, Institute of Organoelemental Compounds, Academy of Sciences USSR; coauthor with T. Ya. Medved', T. M. Funze, V. V. Kurashov, V. V. Korshak, and N. I. Kabachnik of article, "Organophosphorus Polyamides of Methyl-di-(p-aminophenyl) Phosphine, in Russian; received for publication on 5 February 1962. (Moscow, Akademiya Nauk SSSR, Vysokomolekulyarnyye Soedineniya, Vol 5, No 9, 24 Aug 63, pp 1309-1313)

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- HU Wen-hsien (5170/2429/0103), associate in Dermatology, Second Hospital of Sian Medical College; author of a research paper, entitled "Evaluation of Five Different Methods of Treating Corns." (Peiping, Chung-hua I-hsueh Tsa-chih (National Medical Journal of China), Vol 49, No 2, Feb 63, p 102)
- HU Yu-yin, coauthor with V. B. Baranov and G. A. Lyubimov of article, "Calculation of the Boundary Layer on a Dielectric Plate With an Incompressible Anisotropically Conducting Fluid Flowing Around It in the Presence of a Uniform Magnetic Field Perpendicular to the Plate," in Russian. (Moscow, Akademiya Nauk SSSR, Prikladnaya Matematika i Mekhanika, Vol 27, No 3, May Jun 63, pp 509-522)
- LANG Hsiu-chung, Institute of Cardiovascular Surgery, Academy of Medical Sciences USSR; coauthor with V. I. Burakovskiy V. A. Bukharin, and F. N. Romashov of the article, "Classification, Clinical Picture, Diagnosis, and Surgical Treatment of a Completely Defective Atrioventricular Canal," in Russian; received for publication on 8 Jun 63, (Moscow, Vestnik Akademii Meditsinskikh Nauk SSSR, No 9, 30 Aug 63, pp 32-39)
- HUANG Hua-min, Moscow State University; coauthor with N. P. Shusherina and R. Ya. Levina of article, "Delta-Lactones and Delta-Lactams: 33. Dichlorides of 3,4-Dihydropyridones -2", in Russian; received for publication on 28 July 1962. (Moscow-Leningrad, Akademiya Nauk SSSR, Zhurnal Obshchey Khimii, Vol 33, No 9, Sep 63, pp 2829-2833)
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KUO Min-kao, Institute of Chemical Physics, Academy of Sciences USSR; coauthor with I. M. Barkalov and V. I. Sol'danskiy of article, "Kinetics of Benzoyl Peroxide Breakdown in Acetylene Hydrocarbons," in Russian; received for publication 15 April 1963, (Moscow, Doklady Akademii Nauk SSSR, Vol 151, No 5, 11 Aug 63, pp 1123-1126)

KUO Yin-ch'ing (6753/5593/0615)

YANG Kuo-kuang (2799/0948/0342)

Both of K'unming Forestry School; coauthors of article, "Initial Research on the Natural Restoration of the Yunnan Pine on the Upper Reaches of Nan-p'an-chiang." (Peiping, Lin-yeh K'o-hsueh (Scientia Silvae), Vol 8, No 1, Jan 63, pp 69-74)

LI Chao-ch'iang (2612/5128/1730), author of an article, "Polytheneol Ester -- A New Heat Resistant Polymer." (Peiping, Hua-hsueh T'ung-pao, No 1, Jan 63, pp 42-45)

LI Chih-ming (2621/1807/2494)

WEI Ming-feng (7614/2494/1112)

Both of the Third Research Laboratory, Institute of Acupuncture and Moxibustion, Research Institutes of Chinese Traditional Medicine; coauthors of article, entitled, "Treatment of Ordinary Warts by Cauterizing With Punk." (Shanghai, Shang-hai Chung-i-yao Tsa-chih, No 4, Apr 63, p 25)

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LI Ch'un-yu (2621/2504/2509)

LIAN Ping-ken (6151/3521/2704)

Coauthors of an article entitled "Views on Drawing Full Coverage Maps of China on a 1:200,000 Scale" (Peiping Chung-kuo Ti-chih (Chinese Geology), No 7, 1963, pp 1-6)

LI K'o (2621/0344)

CHIAO Yu-chang (6392/3768/4545)

HSIEH Hao-jan (6200/3185/3544)

All of Chang-ku-t'ai Forest Protection Experimental Station Forestry Office, Liaoning Province; coauthors of article, "Initial Research on Sandy Soil Afforestation Techniques With the Pinus Densiflora and the Chang-tzu Pine." (Peiping, Lin-yeh K'o-hsueh (Scientia Silvae), Vol 8 No 1, Jan 63, pp 78-81)

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LIU Sau-mu (0491/1835/1970), deputy director, Institute of Foreign Relations, Chinese Academy of Sciences. (Peiping, Chin-jih Jih-pao, 29 Sep 63, p 3)

LO Ya-chun, Moscow Aviation Institute imeni Sergo Ordzhonikidze; author of dissertation for the scientific degree of Candidate of Technical Sciences, "Investigation of Rotational Failure (Effect of Characteristics of a Wheel Grid)," in Russian. (Moscow, Vechernayaya Moskva, 13 Jun 63, p 4)

LU Wei-ch'un (0712/4850/4783); author of an article, "The Origin of Actinium." (Peiping, Hua-hsueh T'ung-pao No 1, Jan 63, pp 39-41)

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PAI Ko (4101/7704)

LICHun-hua (2621/0193/5478)

CHANG Chao-hsin (1728/5128/2450)

Coauthors of an article, entitled "The Evaluation and Special Properties of Alkaline Rocks in Certain Areas to Mineralize Rare Elements." (Peiping, Chung-kuo Ti-chih (Chinese Geology), No 7, Jul 63, pp 25-32)

SHIH Cheng-hua (2457/2973/5478), associate in Acupuncture-Moxibustion, of the Peoples Hospital, Shanghai; Author of an article, "Clinical Analysis of Acupuncture-Moxibustion Therapy in the Treatment of 105 Cases of Apoplexy." (Shanghai, Shang-hai Chung-i-yao Tsa-chih No 6, Jun 63, p 24)



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SUN Chen-t'ao (1327/7201/3447)

YU Ts'ung-hsuan (0151/1783/3551)

LI Liu-ch'uan (2621/3177/3123)

KUO Ping-nan (6753/3521/0598)

Coauthors of an article, "The Preparation of Luminescent Substance Using Zinc Sulfide as the Base." (Peiping, Hua-hsueh T'ung-pao, No 1, Jan 63, pp 46-48)

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LIU Yu-ch'ang (0491/2589/1603)

Both of Chemistry Teaching and Research Section, Chungshan Medical College; coauthors of article, "Complete Utilization of Coconut Oil." (Peiping, Yao-hsueh T'ung-pao (Pharmaceutical Bulletin), Vol 9, No 1, Apr 63, pp 27-29)

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- WANG Kuo-fen (3076/0948/5358)  
All of the Medicine Section, First Hospital under Shanghai First Medical College; coauthors of article, "Studies on Urea Injection." (Peiping, Yao-hsueh T'ung-pao (Pharmaceutical Bulletin), Vol 9, No 1, Apr 63, pp 29-33)
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17.

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WEI Ch'ing-yun, Leningrad State University; author of article, "Highly-Sensitive Magnetometer for Recording Short-Period Oscillations of the Earth's Magnetic Field in a Frequency Range of 0.1 - 10 Cycles, and Some Results of the Moscow Transformer Plant in the Region of the 'Borok' Geophysics Station," in Russian; received for publication on 27 June 1962. (Moscow, Izvestiya Akademii Nauk SSSR, Seriya Geofizicheskaya, No 7, Jul 63, pp 1081-1086)

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YAO Fang-yu (1202/5364/5588)

CHEN Kuan-i (7115/6306/9001)

Both of the Shanghai Tracoma Central Control Office' coauthors of an article, "Chinese Traditional Therapy in the Treatment of Five Cases of Cataract," (Shanghai, Shang-hoi Chung-i-yao Tsa-chih, No 6, Jun 63, p 33)

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YEN Kuo-sen, Chemical-Technological Institute imini D. I. Mendeleev, Moscow, and Azechwan University, Ch'eng-tu People's Republic of China; coauthor with H. Kh. Karapet'yants of article, "Temperature Relationship of Viscosity of n-Alkanes," in Russian; received for publication on 13 September 1962. (Moscow, Akademiya Nauk SSSR, Zhurnal Fizicheskoy Khimii, Vol 37, No 9, Sep 63, pp 2041-2047)

YIN Te-sui (3009/1795/6659), Shanghai T'ung Hospital; author of article, "Clinical Observations on the Use of Patent Medicines in the Treatment of Edema in Diseases of the Liver and Kidneys." (Shanghai, Shang-hoi Chung-i-yao Tsa-chih, No 6, Jun 63, p 14)

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YU No (0358/6179), associate in Otorhinolaryngology,  
Peking Union Hospital; author of article entitled "A  
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UNCLASSIFIED

7 September 2004

Ms. Roberta Schoen  
Deputy Director for Operations  
Defense Technical Information Center  
7725 John J. Kingman Road  
Suite 0944  
Ft. Belvoir, VA 22060

Dear Ms. Schoen:

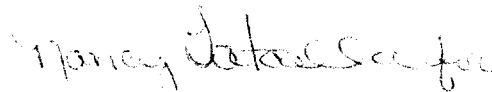
In February of this year, DTIC provided the CIA Declassification Center with a referral list of CIA documents held in the DTIC library. This referral was a follow on to the list of National Intelligence Surveys provided earlier in the year.

We have completed a declassification review of the "Non-NIS" referral list and include the results of that review as Enclosure 1. Of the 220 documents identified in our declassification database, only three are classified. These three are in the Release in Part category and may be released to the public once specified portions of the documents are removed. Sanitization instructions for these documents are included with Enclosure 1.

In addition to the documents addressed in Enclosure 1, 14 other documents were unable to be identified. DTIC then provided the CDC with hard copies of these documents in April 2004 for declassification review. The results of this review are provided as Enclosure 2.

We at CIA greatly appreciate your cooperation in this matter. Should you have any questions concerning this letter and for coordination of any further developments, please contact Donald Black of this office at (703) 613-1415.

Sincerely,



Sergio N. Alcivar  
Chief, CIA Declassification Center,  
Declassification Review and Referral  
Branch

Enclosures:

1. Declassification Review of CIA Documents at DTIC (with sanitization instructions for 3 documents)
2. Declassification Status of CIA Documents (hard copy) Referred by DTIC (with review processing sheets for each document)

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## Processing of OGA-Held CIA Documents

The following CIA documents located at DTIC were reviewed  
by CIA and declassification guidance has been provided.

OGA Doc ID	Job Num	Box	Fldr	Doc	Doc ID	Document Title	Pub Date	Pages	Decision	Proc Date
AD0343932	78-03117A	213	1	18	5117	Scientific Information Report Chinese Science (34)	10/22/1963	89	Approved For Release	3/29/2004
AD0344702	78-03117A	214	1	21	5149	Scientific Information Report Chinese Science (35)	11/4/1963	133	Approved For Release	3/29/2004
AD0344965	78-03117A	215	1	4	5163	Scientific Information Report Chinese Science (36)	11/7/1963	133	Approved For Release	3/29/2004
AD0345229	78-03117A	215	1	23	5182	Scientific Information Report Chinese Science (37)	11/18/1963	179	Approved For Release	3/29/2004
AD0345750	78-03117A	216	1	20	5209	Scientific Information Report Chinese Science (38)	12/11/1963	174	Approved For Release	3/29/2004
AD0344419	78-03117A	217	1	20	5241	Scientific Information Report Chinese Science (39)	12/27/1963	75	Approved For Release	3/29/2004
AD0346493	78-03117A	218	1	21	5277	Scientific Information Report Chinese Science (40)	1/10/1964	115	Approved For Release	3/29/2004
AD0346725	78-03117A	219	1	27	5320	Scientific Information Report Chinese Science (41)	1/27/1964	78	Approved For Release	3/29/2004
AD0347051	78-03117A	220	1	25	5359	Scientific Information Report Chinese Science (42)	2/6/1964	78	Approved For Release	3/29/2004
AD0347849	78-03117A	221	1	39	5407	Scientific Information Report Chinese Science (43)	3/2/1964	174	Approved For Release	3/29/2004
AD0347929	78-03117A	222	1	25	5438	Scientific Information Report Chinese Science (44)	3/5/1964	104	Approved For Release	3/29/2004
AD0348352	78-03117A	223	1	20	5479	Scientific Information Report Chinese Science (45)	3/20/1964	117	Approved For Release	3/29/2004
AD0349491	78-03117A	225	1	18	5560	Scientific Information Report Chinese Science (46)	4/24/1964	118	Approved For Release	3/29/2004
AD0349657	78-03117A	225	1	34	5581	Scientific Information Report Chinese Science (47)	5/4/1964	98	Approved For Release	3/29/2004
AD0332751	78-03117A	183	1	29	3940	Scientific Information Report Electronics And Engineering (22)	10/19/1962	68	Approved For Release	3/29/2004
AD0333146	78-03117A	186	1	20	4041	Scientific Information Report Electronics And Engineering (23)	11/23/1962	73	Approved For Release	3/29/2004
AD0334103	78-03117A	188	1	37	4136	Scientific Information Report Electronics And Engineering (24)	12/20/1962	62	Approved For Release	3/29/2004
AD0334236	78-03117A	190	1	40	4217	Scientific Information Report Electronics And Engineering (25)	1/22/1963	48	Approved For Release	3/29/2004
AD0334769	78-03117A	193	1	39	4339	Scientific Information Report Electronics And Engineering (26)	2/28/1963	68	Approved For Release	3/29/2004
AD0335480	78-03117A	196	1	17	4436	Scientific Information Report Electronics And Engineering (27)	3/21/1963	95	Approved For Release	3/29/2004
AD0336306	78-03117A	199	1	2	4538	Scientific Information Report Electronics And Engineering (28)	4/25/1963	69	Approved For Release	3/29/2004
AD0332433	78-03117A	183	1	35	3946	Scientific Information Report Organization And Administration Of Soviet Science (5)	10/22/1962	60	Approved For Release	3/29/2004